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THE CHEMIST AND DRUGGIST is supplied regularly to every member of the following Societies:—

Pharmaceutical Society of Ireland.
 South African Pharmaceutical Association.
 Pharmaceutical Society of Natal.
 Central Pharmaceutical Association of N.Z.
 Otago Pharmaceutical Association.
 Pharmaceutical Society of Queensland.
 Pharmaceutical Society of South Australia.
 Pharmaceutical Society of Western Australia.

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THE ANNUAL SUBSCRIPTION

TO THE CHEMIST AND DRUGGIST is 10s. In return for this, subscribers in any part of the world receive THE CHEMIST AND DRUGGIST weekly and THE CHEMISTS' AND DRUGGISTS' DIARY, next published, post free. Cheques and postal orders to be made payable to "Edward Halse."

Summary.

THIS is the largest number of THE CHEMIST AND DRUGGIST ever published.

THE Magistrates at Ashford have refused to accept the argument that beeswax is not a drug (p. 160).

WE have had a chat with Mr. Elias Bremridge, whom his old friends will be glad to hear about (p. 134).

NEW SOUTH WALES has practically abolished its tariff. Those interested will find particulars on p. 148.

HOW they suppress illegal pharmacy and adulteration of drugs in France is told in an interview on p. 111.

WE quote a legal view of the Harrop *v.* Wyley case from the *Law Times*, which it will be useful for chemists to read (p. 101).

A CHEMIST has been fined at Brentford for selling sedative powders stronger than those defined in the *Pharmacopoeia* (p. 159).

MR. WESSLER, a Swedish dentist, communicates to us original suggestions in regard to the structure of the tooth-brush (p. 120).

SOME notes on the pharmacist as an after-dinner speaker (p. 116) will strike a sympathetic chord in many pharmaceutical bosoms.

AN extremely varied selection of novelties are described which should have the prompt attention of every enterprising chemist (p. 105).

AN illustrated description of the New York College of Pharmacy on p. 136 is a lucid exposition of American educational methods.

A BELFAST firm, not registered under the Pharmacy Act, have been fined for selling bichloride of mercury for photographic purposes (p. 158).

MR. HUNT has given Dublin assistants the benefit of his thoughts on the difficulties which the modern pharmacist has to contend with (p. 109).

A BRIDLINGTON doctor who dispensed tr. aconiti in error for tr. zingib. fort., took a dose to show the patient that it was right, and died in consequence (p. 98).

OUR town traveller has been calling upon Messrs. W. Martindale, Allen & Hanburys, Cresswell Brothers & Schmitz, Sharp Brothers, and the Committee of the Chemists' Club (p. 105).

A BOOK of chemistry lecture notes taken early in the century, when Thomas Thomson was lecturing in Glasgow, recalls some almost forgotten reminiscences and facts (p. 140).

SOME interesting contributions to the anti-cutting controversy from Messrs. S. Maw, Son & Thompson, Messrs. Bordan et Cie., and others appear in our Correspondence section (p. 171).

WE have brought together the portraits of forty-two members of the wholesale drug trade of London, including the partners of some of the oldest and best respected firms in the City (p. 129).

THE conversion of Messrs. Corby, Stacey & Co's High Holborn premises into a wholesale dépôt exclusively has given us the opportunity of inquiring into the interesting past of that firm, which we recapitulate in an illustrated article (p. 165).

LORD RAYLEIGH'S further researches on argon show that he agrees with Professor Ramsay as to its atomic weight, and he has disproved that it is an allotrope of nitrogen. Our report includes a sketch taken while Lord Rayleigh was lecturing (p. 155).

AN important decision has been given by the Judge of the Bloomsbury County Court imposing a fine under the Pharmacy Act on Messrs. Walton, Hassall & Port, a firm of oilmen who have a large number of shops about London, for selling arsenical fly-papers (p. 157).



The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Stock Lactometers.

There ought to be a great demand for lactometers on the part of milk-dealers after the remark of Mr. Paul Taylor, the Magistrate at North London Police Court, last Saturday. The defence of a milk-dealer, who was summoned by the Middlesex County Council for selling milk adulterated with 15 per cent. of added water, was that his own supply ran short, and he purchased of another dealer. Mr. Paul Taylor: And by the simple use of the lactometer you might have saved the fine I am now going to impose upon you—viz., 10*l.*

Tragic Dea'h of a Doctor.

An inquest was held at Bridlington on January 17 before Mr. J. M. Jennings, Coroner, relative to the death of Mr. John Robinson, surgeon, which took place on the previous Wednesday. In the course of evidence it transpired that the deceased left his house about 10 o'clock on the Wednesday morning and visited some of his patients, one of them being a young man named Proctor. This patient he had, on the Monday, supplied with a bottle of medicine, but owing to the agonising effect produced after taking one dose, he declined to take any more, and deceased said he would take it away and supply him with some weaker medicine. He sent a second bottle, and on taking a small dose on Tuesday night Proctor was similarly troubled, and declined to take any more. Calling on the Wednesday morning deceased expressed his surprise, as he said the prescription was one he made up every day, and he dare take the whole bottle. As a proof he asked for some water, and there and then took a dose, asking the patient to taste it also. They had not taken it long before it became evident that something was wrong with the medicine. The deceased hastened home, and, calling to his housekeeper for some hot water, said that he had been tasting medicine outside and had taken poison by mistake. She was to go at once for a doctor. Two doctors were speedily in attendance, and everything that skill could devise was done, but after suffering agonising paroxysms for upwards of two hours the action of the heart failed, and the deceased fell back dead. Even then nitrite of amyl was administered, and artificial respiration resorted to, but without avail. At first deceased told the medical men that it was an extra strong essence of ginger that was in the medicine, but as the symptoms became more marked his professional knowledge evidently indicated to him what the poison was, as he said, "It was acouite: I am dying." A verdict of death from misadventure was returned. Deceased was 64 years of age.

Oil for the L.C.C.

The Stores Committee of the London County Council have recommended that the tenders of Messrs. Pinchin, Johnson & Co. for heavy and light machinery-oil be accepted.

The Clerkenwell Vestry and their Analyst.

Mr. J. K. Colwell, the public analyst for Clerkenwell, is to have his salary raised by 25*l.*, for which he is to analyse 100 more samples per annum than heretofore. Hitherto he has been supposed to operate upon 200 samples at his own laboratory for 100*l.* a year; but now that the new Public Health Act has imposed new duties upon the Vestry, they have appointed an additional sanitary inspector, part of whose work will be to bring in 100 samples of food and drugs, as do the other two inspectors. The analyst is also to have rooms in the Town Hall, Rosebery Avenue, for carrying on his researches; but one of the stipulations carried by the Vestry last Thursday night, when making the alteration,

was that he shall pay for his own gas. Mr. Colwell, it may be mentioned, is also analyst to the Holborn District Board of Works.

Chemists' Ball at Plymouth.

The first annual pharmacy ball of the Plymouth and District Chemists' Association was held on Wednesday, January 15, at the Town Hall, East Stonehouse, and was a marked success. Over 250 were present, among the visitors being the Mayor of Devonport, Mr. T. W. Martyn, who is also honorary solicitor to the Association. The ball-room and ante-rooms were tastefully decorated with fairy lamps and exotics, a powerful arc light illuminating the main hall. The committee, of whom Mr. C. J. Park was president and Messrs. F. Maitland and H. O. Westcott hon. secretaries, carried out the arrangements to everyone's satisfaction. The music was provided by the band of the Royal Marines. During the evening greetings were exchanged by telegraph with Mr. Michael Carteighe at the Portman Rooms, where the annual chemists' ball was being held. A substantial financial balance is reported by the committee, and this is to be devoted to the educational branch of the Association. The invitations, tickets, and programmes were gratuitously supplied by Messrs. Townsend, Silverlock, and Ford, Shapland & Co. respectively.

A Students' Night at a Liverpool Theatre.

On Thursday, January 16, the students of the Liverpool School of Pharmacy joined with the medical and dental students to take the gallery of the Royal Court Theatre. By previous arrangement with the stage-manager (Mr. Bruce) they managed to have the gallery reserved for them. The whole body, 250 to 300 strong, marched in a solid phalanx from the Victoria University to the theatre singing pantomime ditties on the way. The singing was continued at the theatre until the curtain rose, and then gave place to cheering the artistes as they appeared. By a string arrangement which had been put up during the forenoon, each of the leading male performers was presented with a cabbage, turnip, carrot or other commonplace member of the vegetable kingdom, while to the ladies were presented boxes of chocolates. During the performance, when one of the leading artistes was singing a popular song, one of the youthful "medicos" threw on the stage a pair of stockings. On her next appearance on the stage she had donned the stockings, and this being observed she was received with terrific applause. References by the performers to the students in the gallery, and appropriate jokes cracked by the clowns, were received with thundering cheers, and the merriment seemed to be generally shared in by the occupants of the other parts of the house.

The Chemist's Little Boy Knew What to Do.

Last week, while the children of Mr. J. Spencer Palmer, chemist, Thornbury, were together by themselves in the nursery, Nellie, a little girl of 3, caught herself on fire through standing too near a stove in the room, and started to run downstairs in a blazing condition, when her brother Arthur, aged 7, shouted to her to come back, and, seizing the wash-hand basin, threw the water over her, instantly extinguishing the flames, and thereby probably saving her life. Happily, the child was not injured in the least, though her clothes and hair were much burnt.

A Chemist Cheats the Poor-box.

At the Mansion House, on January 12, Frederick Sillitoe (26), a chemist, having no fixed abode, was charged before Alderman Sir Joseph Dimsdale with attempting to obtain relief from the poor-box of the court by fraud. On the previous day the prisoner was among the applicants for aid, and handed to Mr. Trotter, the Assistant Clerk, a letter purporting to come from Messrs. Corbin, Stacey & Co., wholesale chemists, of 22 Great St. Helen's, stating that they had known him since 1892, and his present destitute condition was caused by ill-health. In answer to questions, he said a year ago he was in the service of the Society of Apothecaries, at Apothecaries' Hall, but had to leave through illness. Inquiries were made, and it was found that these statements were all false and the letter a forgery, and he was given into custody. A testimonial—also fictitious—from the Apothecaries' Society was found on him. In reply

to the charge, the prisoner said he received the letter from a man at the Salvation Army Shelter in Farringdon Street, who told him to present it to Mr. Douglas at the Mansion House and he would get something. Sir Joseph Dimsdale said while, as was well known, the Mansion House poor-box had funds to relieve the deserving destitute, every application was rigorously investigated before assistance was given, so that the charitably disposed might feel assured that their donations were not dispensed to the undeserving or as a mere matter of form. He sentenced the prisoner to a month's hard labour.

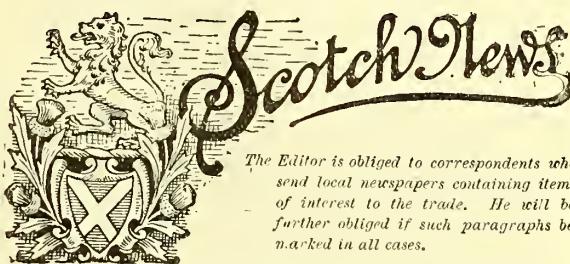
An Official Analyst for Guernsey.

An important step was taken at last week's sitting of the Guernsey States of Deliberation. It was resolved that the States Treasurer be authorised to enter into an agreement with Mr. John Bate Nickolls that in consideration of a salary of 300*l.* per annum the latter's services as official analyst shall be exclusively and entirely given to the States with the exception of such educational work as physics, chemistry, and botany, which he retains.

A Chemist's Party.

Mr. John Jones, who has taken over the business of Messrs. W. & J. Fergnsson, Strand Street, Liverpool, gave a party on January 17, at which nearly fifty of the employés and friends were present. Games, dances, and creature-comforts were provided in abundance. Mr. Jones opened the ball with the wife of the oldest employé (Mrs. Abercrombie), and Mrs. Jones contributed several vocal and mandoline solos during the evening. The merry party broke up at 3 A.M.

that he thought the child had been suffocated. The Coroner, in summing up, said he was sorry to say there was a practice which was very extensive in the city—namely, druggists, persons not qualified to make up prescriptions, doing so. The practice was entirely wrong and serious, because the worst possible thing might be given, and might bring death. There was no evidence in that case that the death of the child resulted from what was taken out of the bottles; but it was a wrong system, and he was surprised the medical profession did not try to stop it. There was no rhyme or reason in poor people going to nonprofessional persons.



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Smoking-concert.

The employés of the Glasgow Apothecaries' Company had an enjoyable smoker on Friday evening, January 17, in the Lorne Restaurant. Among those who contributed were Mr. John Irving, Mr. A. McAdam, Mr. Jas. Bain, Mr. I. Robertson, and others.

Proposed Co-operative Dispensary.

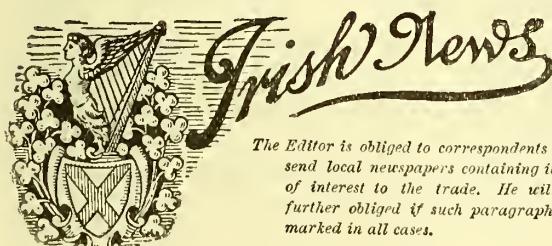
Dundee doctors have been in trouble for some time with friendly societies in regard to the fee per member for attendance, and last week the matter was brought to a head by a conference between representatives of the local branch of the British Medical Association and friendly-society men. The doctors' claim was a fee of at least 2*s.* 6*d.* for examination of each new member, and 2*s.* 6*d.* per year for medical attendance without medicine. Dr. Buist, Secretary of the Medical Association Branch, said 2*s.* 6*d.*, inclusive of medicine, left no margin, whereupon a Forester suggested that the friendly societies of Dundee were strong enough to have a dispensary of their own. The laymen rather pooh-poohed the idea that 2*s.* 6*d.* a member, including medicine, was too little, and although an Oddfellow said amidst laughter that his lodge had never yet received a refusal of the half-crown from any doctor (they were too glad of the job), the general opinion was that advice and medicine should be separated. A delegate stated in his lodge visits cost 1*s.* 6*d.* per member per annum, and the medicines brought the sum up to 3*s.* 3*d.* Ultimately the question was left open for the friendly societies to decide.

A Chemist's Action for Interdict.

In the Court of Session, Edinburgh, John Macintyre, chemist, North Berwick, has raised an action before Lord Low to have Mrs. Margaret Brownlee, of North Berwick, interdicted from building on a certain road approaching his aerated water factory.

Pushing the Sale of a Non-intoxicating Wine.

An action in the Court of Session, Edinburgh, before Lord Moncreiff, in which proof was to have been led on Tuesday, having reference to advertising "Mersano" non-alcoholic wine, has been settled. The plaintiffs were the Midland Railway Company, who said that through agents they entered into an agreement in 1894 with the proprietors of the wine, who were to pay them 200*l.* a year for five years on condition that they would sell Mersano wine in their refreshment-rooms, quote it in their wine lists and exhibit show-tablets in all their refreshment-rooms. The plaintiffs averred that they fulfilled their part of the agreement, and sold 2,034 bottles of Mersano, of the value of 29*l.* odd, which was amply sufficient for the demand. They further stated that in 1894 the defendants tried to float a limited company for the manufacture and sale of Mersano, and that in their pro-



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A Clock Parcel.

Messrs. Cantrell & Cochrane, chemists, Dublin, have presented their customers with a "clock parcel," containing, besides a useful timepiece, a number of stationery requisites.

A Chemical Census.

In the newly-issued Thom's Directory of Ireland it is observed that the number of chemists in Dublin is given as 308, and in addition there are 41 manufacturing chemists. The number of chemical works in the city amount to 8, and these employ 819 persons.

Destructive Fire.

On Friday morning last a serious fire broke out on the premises of Mr. Samuel R. Murphy, chemist and druggist, Main Street, Brookborough. The establishment was burned to the ground, and an adjoining house was likewise destroyed. It was feared at one time that the whole of the street would be burned. The damage is estimated roughly at 10,000*l.*, but the exact amount is not yet known.

The Coroner of Belfast and Local Druggists.

In Belfast an inquest has been held touching the death of a child aged 11 weeks. The mother said that five weeks ago her husband got a bottle of medicine from Mr. C. Gibson, druggist, Sandy Row, and told her that Mr. Gibson directed him to give a tablespoonful of warm water and half a spoonful of the medicine to the child. She gave a part of that, and got a second bottle from Mr. James Mahon, who kept a registered shop in Sandy Row. The label on the bottle was marked "Dill water." She gave the child none of the medicine after January 4, and it died during the night of the 9th. Dr. Simpson gave evidence

spectuses they mentioned as a proof of the suitability of the article for high-class trade that they had lengthened contracts with the plaintiffs among others. The plaintiffs state that at the end of the first half-year the defendants failed to pay the stipulated 100%, and they wrote to terminate the agreement. They sued for 1441. 16s. 10d. as the sum due under the agreement. The defendants denied that the agreement was finally adjusted, or that the plaintiffs fulfilled any part of it except in purchasing Mersano. The case has been settled on the footing of the defendants making a money payment, the amount of which was not divulged.

French News.

(From our Paris Correspondent.)

M. MARCEL BERTRAND, who has been recently elected to the Academy of Sciences, is the eighth member of the same family who has a seat at the Institute; amongst them are five in the Academy of Sciences, of which M. Joseph Bertrand is Perpetual Secretary, and M. Alexandre Bertrand, of the Academy des Inscriptions et Belles-Lettres.

"ORGANIC ACIDS" forms the subject of a carefully prepared paper by M. B. Dupuy, and which has secured for him the Barbier prize, offered by the Academy of Sciences. The author has devoted himself to original researches of considerable value in connection with his subject. M. Dupuy is also known by his two published works on "Alkaloids," and "Glucosides."

THE PASTEUR MONUMENT FOR PARIS.—The subscribers' list for the monument to M. Pasteur to be erected in Paris is now formally opened. The subscription is to be international, and the committee, which has the President of the French Republic as Honorary President, asks for adhesions as soon as possible, in order to enable an opinion to be formed as to the form the statue will take. Remittances can be made to the Pasteur Institute, 25 Rue Dutot, Paris.

EXPLOSION IN A LABORATORY.—A loud report caused a good deal of commotion last Friday evening at 7 Rue Corneille, Paris, in the courtyard of which is a laboratory occupied by M. Franche, analytical chemist. The explosion was caused by gas from a jet coming into contact with some essence which was being manipulated. A fire broke out, but was easily extinguished, and the damage done was comparatively small. M. Franche escaped without injury.

LOST OR STOLEN?—A retired pharmacist, named M. Caillard, residing at Saint André de Cutzac, last week went to Bordeaux on business, and took with him a large parcel of stocks to bear worth 225,000f. (9,000£.). When he called on his stockbroker to lodge the certificates, he was stupefied to discover that they were missing from his pocket. He cannot tell whether they were stolen or simply lost, but he hopes they may have fallen into the hands of an honest person, who is seeking for him as anxiously as he is in search of his comfortable little fortune.

THE NEW PHOTOGRAPHY.—At the Academy of Sciences, on Monday, M. Poincaré referred to the experiments of Professor Röntgen, of Würzburg, and showed a positive picture, which he had received from Germany, representing the skeleton of a hand photographed by M. Röntgen's famous invisible rays. On the previous day he said Dr. Oudin had, with a Crookes's tube, passed rays through this glass positive into a shut-up black cabinet, in which was placed a Lumière's photographic plate. The box was about 3 centimetres from the apparatus, and the exposure lasted for ten minutes. A very clear negative of the hand was obtained on the plate, and this was exhibited to the members present and excited great interest. There seems no doubt, therefore, that Professor Röntgen's marvellous discovery is fully confirmed.

A DENTIST'S FORTUNE.—The will of the late M. Piétre, a well-known Paris dentist, has given rise to a somewhat unusual lawsuit. It contains a clause written in 1871, bequeathing four millions of francs (160,000£.) to his wife. Matrimonial troubles have since followed, and Mme. Piétre obtained a divorce. She was agreeably surprised at her good fortune,

but the other heirs, M. Piétre's nephews, contended that the clause in question had evidently been left in the will by pure oversight. They have gained the victory in the first court, but Mme. Piétre is appealing on the ground that it was impossible that such an important matter could be attributed to an oversight, and she seems convinced that her husband forgave their differences. The nephews will plead that the money was left to the "wife," which the divorced lady was not, according to law, at the time of his death. M. Piétre's fortune is only one of several large ones made by dentists in Paris during the past thirty-five or forty years, but they are no longer made with such comparative ease, as, although the principal practitioners obtain good prices, competition has greatly increased, and the profits have to be divided amongst many more participants.

THE PARIS SOCIETY OF PHARMACY.—At the meeting of this Society for the current month, the change of officers usual at the commencement of each year took place. The retiring President, M. Julliard, whose popularity has increased during his term of office, made the customary complimentary speech, and thanked the Society for the honour they had conferred upon him. M. Villiers, the incoming President, made his introductory speech, and received marked signs of sympathy. With him are M. Sounerat as Vice-President and M. Viron as Secretary. A detailed report of the work accomplished by the Society, and of the discussions at the monthly meetings, was read by last year's Secretary, the record being apparently satisfactory in most respects. A principal feature of the meeting was a paper by M. Plauchou on the subject of "The Teaching of Materia Medica." An announcement was made by M. Rocquillon to the effect that the Society has awarded two medals in connection with a competition on the subject of natural sciences; M. Guérin receives a gold medal and M. Lutz a silver medal.

PROPOSED NEW ANALYTICAL LABORATORY.—During the past eight years the General Council of the Seine has had an arrangement with the City of Paris, by which all the chemical analyses for the Department are made at the Paris Municipal Laboratory; the cost of this to the Council is 54,100f. (say 2,160£.) per annum. The object aimed at was to secure for the suburban residents the same security as regards chemical analyses as Parisians enjoy, as well as to obtain an economy by thus centralising the work. The General Council is disposed to have a separate laboratory, and has had the matter under consideration during the past two years. M. Gervais, Chairman of the Special Committee appointed to consider the proposals, thinks it would be more rational to unite the services of chemical and bacteriological analysis, which are now separated, under one management. Such work as the analysis of water, alimentary products, physiological virus, and microbes, can only be conducted satisfactorily, he says, if it is uniform. Better scientific results would be obtained if the existing laboratories were transferred to the control of the Prefect of the Seine, and both municipal and departmental sections established.

TRADE-MARKS in their connection with pharmaceutical matters, is the subject of an interesting pamphlet issued by M. A. Petit, President of the General Association of the pharmacists of France, in which he fully develops his reference to this subject made at the Marseilles Pharmaceutical Congress last autumn. He draws attention to the fact that neither pharmacy nor trade in general is effectually protected by the existing trade-mark laws in France. Any one, whether a pharmacist or not, can register a mark of a pharmaceutical preparation, and the names of medicaments so registered become the property of the person registering, which may become of considerable detriment to professional interests, as certain law-suits have shown. M. Petit considers it wrong that the law should permit anyone to have the ownership of the name of a medicament. He has no objection to trade-marks for special products as a means of allowing manufacturers to make a distinction between their own preparations and those of their competitors, but he looks upon proprietorship in the name of a chemical product as intolerable and dangerous. M. Petit says that the objection which he raises exists elsewhere as well as in France, and that pharmaceutical preparations are often sold in certain foreign countries to the public at four or five times the price that the same preparation can be obtained under

their scientific names. He suggests that the following clause should be added to the proposed new law on pharmacy:—"The denominations of medicaments remain public property, and cannot be monopolised by individuals or alone form the object of a trade mark."

PHARMACEUTICAL LAWSUITS.—During the recent visit of inspection at Mézières, Ardennes, the Commission charged with controlling pharmacies, herbalists, and grocers' shops found a grocer in that locality who was selling pharmaceutical products, such as castor oil, pectoral syrup, ipecacuanha, &c. Legal action was taken against the offender, who pleaded that he was justified in keeping remedies for sale, as there was no pharmacy in his district. This could not be accepted by the Court as justification for a distinct infringement of the law, and the defendant was condemned to pay a fine of 500f. (20*l.*), which was afterwards remitted under the Bérenger (First Offenders) Act. Another charge of illegal practice of pharmacy was brought, a short time ago, by the Syndicate of Pharmacists of the Rhône against a Mme. Sombet. Her offence consisted in selling saccharin pastilles, and the Syndicate obtained a favourable judgment on the first hearing of the case. The lady appealed, and the Lyons Judges named several experts, who were asked whether saccharine was a medicament. Energetic efforts were made by the Syndicate to get evidence in favour of the affirmative view, but the experts came to the conclusion that saccharin is neither a medicament nor an article of food, but a condiment. This decision is regarded by the Syndicate as "absolutely monstrous," and they have applied for a counter-expertise. The Lyons pharmacists do not appear to be fortunate in their lawsuits. Some of them have lately been prosecuted by the Inland Revenue authorities for selling certain medicinal wines—such as quinine wine and others—without paying the city dues. The Syndicate of the Rhône took the matter up, and, on the first hearing, judgment was given for the pharmacists. But the Inland Revenue carried the case to a higher court, and obtained a reversal of the first decision. The Syndicate then resolved to take the judgment of the Court of Cassation, but, owing to an error of procedure on the part of a court official, the pharmacists lost their case. There is no further appeal possible, nor any other redress.

A Legal View of Chemist's Responsibility.

WE note the following from the *Law Times* of January 18. The article is entitled "Negligence in the Sale of Poison," and the facts on which the recent action of Harrop *v.* Wyley are first summarised. The writer then proceeds:—

The action, as brought against Messrs. Wyley, was framed in tort only, and was brought by the widow as executrix, claiming damages under Lord Campbell's Act for the death of her husband. As he was a man making a good income by his work, the damages so claimed were, of course, large. Against Mr. Brown, the retailer, the action was framed in contract as well as in tort. The measure of damages under the two forms of action was, however, very different. For the breach of contract to supply phenacetine as ordered, it was admitted that only such damages as had resulted to Mr. Harrop's estate could be claimed by his executrix. Such damage, in fact, only could have amounted to a few pounds. In order to support a claim under Lord Campbell's Act, some wrongful act, neglect, or default must be shown, and this the plaintiff was not in a position to do against the retail chemist. Although nominally a defendant, Mr. Brown was called as a witness—the principal witness—for the plaintiff, and narrated very clearly and precisely what he had done with the drugs he received. He was closely cross-examined on behalf of Messrs. Wyley, with the object of suggesting that the unfortunate mixing of the poison with the phenacetine might be due to some carelessness of himself or his assistants; but the attempt so to shift the responsibility on to him failed. The death from strychnine-poisoning was admitted, and there was a strong *prima facie* case that the poison was sent out by the wholesale chemists in a wrongly labelled bottle. At the close of

the plaintiff's case, the action was settled by Messrs. Wyley offering a substantial sum for damages and costs, which offer was accepted.

The further argument of questions of some nicety was thereby avoided, and the final decision of the legal consequences of carelessness on the part of persons in the position of the principal defendants was postponed to some future date. Decisions of our Courts have in various cases fixed responsibility on persons who, without any personal culpability, have placed things in themselves dangerous in such a position that third persons have in consequence sustained injury. The only case, apart from contract between the plaintiff and defendants, in which the dispenser of a mischievous drug has been held responsible for injuries thereby caused to a person not the purchaser, is the well-known case of *George v. Skivington* (21 L.T.Rep. 495; L.Rep. 5, Ex. 1), where damages were recovered for the injurious effects on the plaintiff's wife of a hair-wash sold to him. There, however, though the wife was not a party to the contract, the preparation was sold for her use to the defendant's knowledge, and so the Court of Exchequer held that he was liable for the injury she sustained owing to his want of skill and care, without discussing other grounds at all. In the recent case at Birmingham, the deceased man was in no sense in the contemplation of Messrs. Wyley when they supplied their customer with the bottle which contained the poison.

For a precedent for this action we must go to the United States. In 1852 a very similar case was decided by the Court of Appeal in New York, and damages were awarded to an individual against a firm of wholesale chemists, who had sent out to a customer of theirs the poison belladonna, labelled so as to appear innocuous, in consequence of which the plaintiff got a dose of the belladonna by mistake, and was severely injured. This case *Thomas v. Winchester* (6 N.Y. Appeals) was decided on the ground that injury to someone was the natural consequence of the issue of a poisonously drug wrongly labelled—whether by sale or otherwise made no difference in the opinion of the Court—and consequently that the person injured was entitled to maintain an action against the persons who caused the injury. If the case of *Harrop v. Wyley* had not been settled, the Court of Appeal here, and possibly the House of Lords, might have had to determine whether *Thomas v. Winchester* is to be considered good law. Sir Frederick Pollock, in his book on torts, cites it with approval; and the fact that the doctrine there laid down has been instrumental in securing the payment of substantial damages stamps that approval with the sanction of success. Accidents such as caused the death of Mr. Harrop are, fortunately, rare. It may be long before a similar action comes into court.



More familiar drugs.—The first, Black Poppy (*Papaver nigrum*), the second American Elder (*Sambucus Canadensis*).—From Meyer Brothers' *Druggist*.

THE SUFFERER: "Do you think it would relieve my tooth-ache if I should hold a little liquor in my mouth?" His Wife: "It might, if you could do it."—*Life*.

FOR "THROAT COUGH" the sovereignest thing in the world, according to an American doctor, is tinct. lobelia, 3ss.; tr. sanguinar., 3j.; oil of spearmint, 3ss.; and simple syrup to 3*lb.* Take a half-teaspoonful, undiluted, every two or three hours, and take neither food nor drink for fifteen minutes afterward.

OUR SUPPLEMENTS.

ONE of the prominent features of the old **CHEMIST AND DRUGGIST**—that is, before the days of the weekly issue—was the insertion of circulars and price-lists, which feature we now, owing to postage exigencies, concentrate into two issues per year, our Winter issue and our Summer number. It happens, therefore, that the present number owes much of its artistic merit to a large number of English and foreign houses who take advantage of it to bring certain special lines prominently before the trade. We hope that their enterprise will be repaid by that response on the part of retailers and wholesalers which is characteristic of **CHEMIST AND DRUGGIST** readers. For the benefit of those who may wish to emulate the desire of these enterprising advertisers we may mention that the Summer number will be published on July 25, 1896, and our publisher will be glad to supply inquirers with particulars on application.

The folios appended to the paragraphs which follow indicate the section of the advertisements in which the supplements will be found.

Dr. J. C. Ayer & Co., of Lowell, U.S.A., whose "family medicines" are as popular in British colonies as in U.S.A., and are familiar in these islands too, insert a circular regarding them and Ayer's Hair-vigour. (Pp. 64-65.)

C. Barry & Co. insert one of the most striking of the series of supplements included in this issue, this having reference to Boissellier's Cocoagene, one of the best possible profitable extras for chemists' trade. The cocoagene consists of pure soluble cocoa extract compressed into tablets of the diameter of a penny, one of which makes a cup of delicious cocoa. The speciality is put up in 6d. boxes containing twelve tablets. The article has only to be shown to sell. (Pp. 32-33.)

F. B. Benger & Co. (Limited) again insert the circular regarding Benger's food, peptonised products, and digestive liquors which they have distributed through **THE CHEMIST AND DRUGGIST** on several occasions. The fact that one of the most noted specialists on gastric disorders, Sir William Roberts, has been associated with Mr. Baden Benger in the production of these preparations is, perhaps, the best testimony to their integrity and usefulness; and as time goes on they do not diminish in popularity, which, after all, is the sure test of fitness. (Pp. 32-38.)

Bleasdale (Limited) have, we are glad to notice, worked up the leading ideas of their **CHEMISTS' AND DRUGGISTS' DIARY** advertisement into a handsome and attractive circular. It is a chapter in evolution which they submit, and along with it a series of woodcuts of the specialities which they pack, and it will be noted in regard to these that they are "your own" brand—*i.e.*, the retailer may, without increased cost, have his own name and address placed upon each and all of these specialities. On the back page a New Woman has something to say to "up-to-date" chemists. (Pp. 144-145.)

Blondeau et Cie, the originators and proprietors of Vinolia preparations, provide us with the most admirably printed price-list which has ever come out of their factory. The design of the cover of the list is copyright, and is an example of the impressionist school of design which has so effectively awakened art to the possibilities of colour-printing. We are glad to note that the firm make a statement regarding their business policy, the kernel of which is that quietly, unostentatiously, they have been pursuing

a non-cutting scheme for years, and still with distinct success. For the benefit of those who may find anything new in the list which they desire to stock promptly we would suggest the use of the telegraphic code given on pp. 3 and 4, together with the numbers attached to the more important articles in the list, which as a whole speaks for itself. (Loose.)

The British-American Ball-nozzle Company have adapted the remarkable invention by Mr. Charles V. Pollock to enema-syringes, and they insert in this issue a circular showing graphically how the new system when adapted to syringe-nozzles and the old work. Elsewhere in this issue we describe the invention. (Pp. 64-65.)

Brunner, Mond & Co. (Limited), in again inserting a circular regarding their ammonio-soda products, call special attention to the advantage of sodium bicarbonate for generating carbonic-acid gas for aerated waters, and give instructions how to use it. There is no question that for colonial trade especially sodium bicarbonate is as cheap as chalk, gives cleaner results, and the freight is considerably less. (Pp. 64-65.)

Cantrell & Cochrane's circular will interest our foreign and colonial readers even more than those at home, for while here we have many ginger ales, the reputation of C. & C.'s aromatic ginger ales in America and the colonies is practically unrivalled. The object of the price-list is to show traders the exact style of the firm's labels, which are reproduced in facsimile so as to defeat deception. (Pp. 32-33.)

George Curling & Co. send us a circular and price-list for insertion in copies of the journal addressed to Colonial, Indian, and foreign druggists. It deals with the specialities packed or manufactured by them, which are much in demand abroad, and for the first time they include in the circular Laurent-Perrier coca-champagne Jerezconia wine, Rosbach and other mineral waters, for which they are sole agents for India. (Pp. 192-193.)

J. Defries & Sons (Limited), the sole licensees and makers of the Chamberland-Pasteur filter, illustrate several of the forms in which the filter is supplied, and appended thereto are the opinions of authorities. The fact that the Ashantee expedition is equipped with these filters speaks volumes for their efficiency. (Pp. 64-65.)

M. L. Fonbene is the manufacturer of the New Star circular filtering-paper, which has the great advantages of strength in texture combined with purity of material. Through an accident the samples of paper intended to be distributed with the circular have not reached us, but a postcard sent to the factory in Couze St Front, France, will bring samples to anyone. (Pp. 144-145.)

William Gray & Co., Hull, who have already on several occasions submitted their oil and colour manufactures to the drug-trade, again do so in a plain but effective list. This firm can supply chemists who do a heavy trade with all requisites that they need, such as white-lead, dry and liquid paints, plain and boiled oils, varnishes, dryers, turpentine, soap, brushes, &c., and the prices quoted appear to us to be a good inducement for a trial order. (Pp. 192-193.)

Halford & Son, whose jellies for invalids we brought under the notice of the trade a few years ago, are obtaining increasing testimony of their value, and half of their circular

is devoted to excerpts from published opinions. In addition to quoting their prices, Messrs. Halford also offer advertising-tablets. (Pp. 32-33.)

Geo. W. Harrison gives particulars of his reliable rat and mice poisons, which, it will be observed, do not require registration, and on this occasion gives the opinions of a number of chemists who stock the specialities. The testimony thus afforded is the most convincing proof that Mr. Harrison's agency is one which pays to take up. (Pp. 192-193.)

C. J. Hewlett & Son, in a price-list inserted in foreign and colonial copies only, call special attention to their arrangements for exporting tinctures, liniments, fluid extracts, and other spirituous preparations in bond, free of duty. The firm have thoroughly mastered the fiscal intricacies of this branch of business, and their terms are such that our foreign and colonial subscribers will appreciate the advantages offered. We understand that the practice of getting these, in 1 lb. bottles, favoured by the dealers in Indian bazaars, is extending, and, it is right to mention, Messrs. Hewlett have advocated this manner of packing since the Custom authorities agreed to the general exportation of medicinal spirits in bond. (Pp. 192-193.)

Johnson, Matthey & Co. (Limited), whose reputation as assayists and metallurgical chemists is world-wide, insert a list of their manufactures, which suffices to show how varied are their products, as they cover the requirements of medicine, practical and technical chemistry, and photography. The list also disproves the common error that fine or rare chemicals are not made in this country. (Pp. 32-33.)

Leath & Ross's supplement is certain not to be missed, because in colour it approaches as closely to the C. & D. supplement as any one of the series. It is wholly devoted to description, illustration, and prices of their homeopathic showcases, and it will be observed after a slight examination, that in purchasing one of these cases, the chemist secures a useful and attractive piece of shop-furniture for nothing, as the contents of the case in all instances realise the price paid for the case and contents. (Pp. 144-145.)

The Liebig Medicated Wine Company (Limited) show facsimiles of their leading specialities as packed for retail—viz., "Vin Vis," "Vin Salvo" (beef and coca wines respectively), and extract of meat. (Pp. 32-33.)

T. Howard Lloyd & Co. insert a formulary and price-list of their pearl-coated pills as packed in six styles, so that the large buyer and the small retailer see at a glance how moderate are the quotations. The firm's capsules, compressed tablets, compressed flowers, and trochettes are treated similarly, while several specialities are illustrated which are wanted in most businesses. (Pp. 160-161.)

McKesson & Robbins, of New York, in once more distributing their formula-list of capsuled pills (for which Messrs. S. Maw, Son & Thompson are London agents), add to it brief descriptions of two new medicines which have been lately much spoken of in the United States. These are pyrozone solutions, which present the antiseptic and preservative properties of hydrogen peroxide in stable form, and tartar lithine, an anti-uric remedy for gout and rheumatism. (Pp. 64-65.)

May, Roberts & Co. have managed to introduce a number of new features into their price-list of druggists' sundries, proprietary medicines, &c. The list extends to 128 pages, exclusive of cover, and in it there are quoted a multitudinous variety of articles required by chemists and medical men, these being illustrated where possible and priced "net" throughout. In regard to the latter point, we may recall the fact mentioned by us a few weeks ago

that, happening to open the list at indiarubber goods, we found that the prices had not been raised, although it is notorious that raw indiarubber has advanced in price. This appears to be typical of the firm's policy: they give the trade the advantage where they can, and the support which they receive in consequence enables them to bring before a wider circle of traders the advantages which they offer, and of which the price-list is the best possible exposition. (Loose.)

A. & F. Pears (Limited), with that originality which characterises all their advertising, preface their circular regarding the terms upon which they supply their soap to chemists with a replica of the gold medal awarded to the soap by the jurors of the Paris Exhibition. The effective nature of the circular is an index that the showcards which they will supply to retailers on application are such that no one will be ashamed to exhibit them. (Pp. 32-33.)

John Richardson & Co., of Leicester (Limited), appear to have adopted in their advertisements the plan of allowing their manufactures to speak for themselves, for the circular which they send to the trade through us contains not a dozen words of laudation. Good as their circular is from the artistic point of view (so good that it might imperil our space were we to begin to describe it), the first feature mentioned is the better indication of strength. The departments in which the firm are *facile princeps* are exemplified by *fac-similes* of containers—viz., pills, capsules, lozenges, pastilles, and tablets. (Pp. 144-145.)

Shirley Brothers have adopted a new idea in price-lists which is "far better than gold-mines." The list is so varied that one must refer to it as a whole, but it will be seen that the main point about the first page is that Shirley Brothers do the work of that extra assistant whom the chemist is compelled in these cutting times to do without. The firm have also made a study of the wants of babies, with the result shown on the back of the circular. (Pp. 64-65.)

Snowdon, Sons & Co. have introduced an extra quality of their petroleum jelly under the happy title of "Snow-drift." We have not had the opportunity of examining this ointment-basis, but from what we know of the firm's other specialities, and the high testimony of Dr. Samuel Rideal, we take it that it should be well worthy of a trial. The firm have also introduced quite a peculiar petroleum jelly of that tough or stringy consistency which many chemists require. (Pp. 192-193.)

Spratt's Patent (Limited) preface their circular with a picture of a high-class collie dreaming of canine delights—visions of gold and silver trophies secured, doubtless, as much by careful feeding as by heredity. The business which the company have enabled chemists to build up in their profitable extras is too valuable a one to lose grip of, so that retailers should peruse once more the price-list of "special lines" which sums up the circular. (Pp. 192-193.)

Dr. T. Babb's Vi Cocoa (Limited), the manufacturers of Vi-cocoa, submit good reasons why chemists should stock this article. In the first place, it is a combination of ingredients which confer upon it distinctly medicinal properties, as it contains, in addition to cocoa, the active ingredients of hops and malt, and a large percentage of kola-nut; secondly, medical men speak highly of it; and, thirdly, it is supplied on the anti-cutting basis. Particulars of these points will be found on the circular, the frontispiece of which is a shy little maid making the beverage. (Pp. 64-65.) H. P. Truefitt (Limited) offer their specialities for the hair, which are really amongst the best-paying things going, while their reputation is unique. A price-list of

them is given on the back of the circular. (Pp. 144-145.)

W. R. Warner & Co., of Philadelphia, through their London agents, Messrs. F. Newbery & Sons, insert a formulary and alphabetical list of their sugar-coated pills, and other forms of pilular medicines, effervescing preparations, lentiforms, &c. The list is freely illustrated. On the second page of the inset is an address to the trade, in the course of which the firm say, "We are prepared to supply millions of pills, but it is impracticable to properly manipulate a smaller number than 3,000." This statement is slightly ambiguous, for we have seen pills coated in the firm's factory by millions. We take it that their custom of keeping the manipulative details of massing and cutting pills as far as possible upon the approved methods of retail pharmacy is at the bottom of the statement, for the productive capacity of their factory is unlimited. We may also note that Messrs. Warner keep in close touch with the British medical profession, which is an important factor in buying their goods. (Loose.)

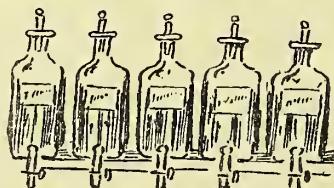
Shop-hints.

FOR the arrangement of plasters Mr. Arthur B. Burrows, of Washington, D.C., communicates the following idea to *Merck's Market Report* :—"Take a board as wide as the length of the plaster-boxes—e.g., Alcock's—and long enough to hold eight or ten boxes placed side by side. Remove the plasters from the boxes, and fasten each box to the board by



means of carpet-tacks; then replace the plasters in the boxes, and secure the shelf thus made under the counter, or in any other convenient place, tilting it at an angle of about 30°, so that the tops of the boxes may be readily visible as shown by the illustration."

Mr. Burrows has another idea, but his sketch of it is not so handsome. Still it will serve. The idea is to save time



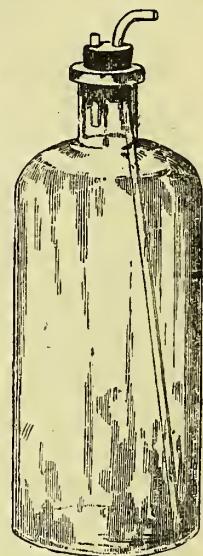
in dispensing by having tapped bottles or tubes and pinch-cock, as shown in the figure. By this means the necessity for removing the stopper when dispensing is avoided, and it is not even necessary to lift the bottle from the shelf, since



simple pressure on the pinch-cock is all that is required to induce a flow of liquid. Our objection to the suggestion is

that the taps will drip, and the sediments will be bothersome.

Mr. G. S. Taylor, in discussing the preparation of aromatic waters in the *Druggists' Circular*, gives preference to the simple process of adding the oil to distilled water (1 oz. to 1 gallon—an excessive amount of oil in our opinion) and shaking. For those waters made with oils lighter than water, Mr. Taylor uses a bottle similar to that illustrated. The cork is provided with two holes large enough to admit two glass tubes. One of these tubes, of a slightly smaller diameter than the other, should be of sufficient length to project $\frac{1}{2}$ inch on either side of the cork. The other tube should be allowed to project far enough above the cork to serve as a spout, the end being bent at an angle of about 45°; the other end should be allowed to reach almost to the bottom of the bottle. In arranging the bottle in this way it will be seen that the liquid can be quickly poured, leaving the undissolved oil floating on top. This bottle is to be kept as a supply-bottle, the shelf-bottle being filled as needed. All medicated waters prepared by brisk agitation are perfectly bright and clear if filtered through cotton or paper, and keep better than when filtered through carbonate of magnesia, phosphate of calcium, &c. In making camphor-water by this process it is better to use the camphor in very small pieces. A little more shaking is necessary to saturate the water, but it is preferable to powdering the camphor with the aid of alcohol. As far as the sense of taste and smell is concerned, camphor-water so made is far above that produced by any other method, and apparently contains a greater percentage of the drug. Cold distilled water is preferable to hot or tepid water.



The Lesson of John Henry Bayne.

John Henry Bayne
Smiled a smile of disdain,
And thought it so awfully funny
To say that the Store,
Which had opened next door,
Could ever expect to make money;
He'd been in the neighbourhood ten years or more
And he guessed that he'd still sip the honey.

So with heart light and gay,
He went on the old way,
With threepence ha'penny for Beecham;
And prescriptions he'd mix,
At the old one-and-six,
For if Stores wanted lessons he'd teach 'em
That for pharmacy proper the public would fix
On professional talent to reach 'em.

But it chanced very soon,
That John changed his tune,
When he found that his takings were lower,
And that many a client,
Whom John thought reliant,
Was taking his cash to the Store;
So John dropped his prices, and though still defiant,
He wished he had dropped them before.

Now John Henry Bayne
Wears a smile full of pain,
Though if you mention "Store" he will mock it;
And he tells to his friends,
That the Store merely tends
To send up his sales like a rocket;
But he's learnt that the public's devotion depends
On how little you take from their pocket.

W. C.

NOVELTIES

CAFÉ ZYLAK.

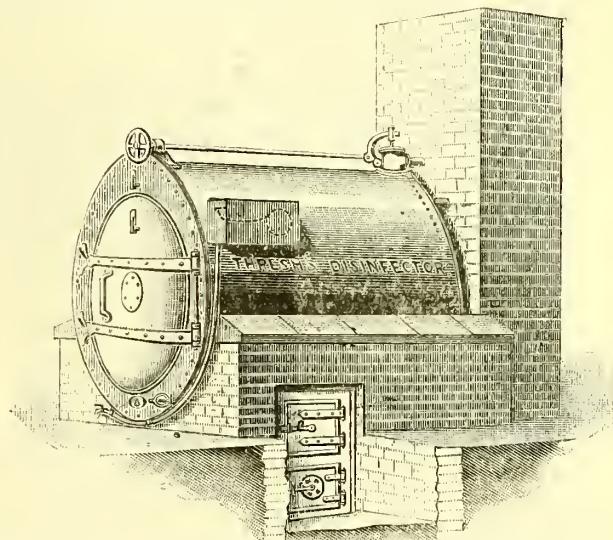
MESSRS. SAVORY & MOORE, 143 New Bond Street, W., have introduced, under the above original title, a new preparation of coffee with peptonised milk, for which we may safely predict a good future. Tinned coffee and milk is not a thing which one would venture to present to a guest, but this Café Zylak is so delicious in aroma and flavour that it is likely to secure the admiration of any who taste it. The coffee has also the superior advantage of being easily borne by the stomach, and as there are many people who like *café au lait*, but cannot drink it because it disagrees with them, Café Zylak will suit them exactly. It is put up in 1s. 6d. and 2s. 6d. tins, and though, bulk for bulk, dearer than condensed milk and coffee, this comparison should not be made, for there is no comparison in quality between the articles. Chemists may introduce it to their customers with confidence, and medical men, too, will be glad to see it.

TAKA-DIASTASE.

WE briefly referred to this new product in reporting upon the last exhibition of the British Medical Association, when Messrs. Parke, Davis & Co. showed some experiments with it at the laboratories, 21 North Audley Street, W. We understood then that it was not quite ready to place on the market, but it is now, and that is the occasion of some experiments by ourselves. Taka-diastase is to malt extract or to saliva what pepsin is to the gastric secretion, except that Taka-diastase is obtained neither from malt nor saliva, but is the product of a fungus, *Eurotium oryzae*, a mycelial of the aspergillus family, secreted during the growth of the organism. It was discovered by Mr. Jokichi Takamine, a Japanese chemist, to whose research we referred early in 1895, and Messrs. Parke, Davis & Co. have secured the working rights of his process. The diastase which they make by his process is a grey-coloured powder which dissolves in distilled water, and is recommended to be given in doses of 1 to 5 gr. Comparing it with a first class malt extract as to diastasic power, we found that Taka-diastase appeared to be somewhat slow in action—that is to say, one drachm of the malt extract digested in three and a half minutes what it took a quarter of a grain of Taka-diastase to digest in seven and a half minutes, but the latter had the far more important characteristic that the digestive power did not stop there, for when we added a single grain to a mucilage of 100 gr. of arrowroot there was not the slightest starch-reaction at the end of fifty minutes, the temperature of digestion being between 45° and 50° C. We feel sure that the grain of Taka-diastase could have digested more than 100 gr. of arrowroot; but as Messrs. Parke, Davis & Co. claim that degree of digestion only, we thought it unnecessary to proceed further. It is evident that in this product we have a medicinal agent for which there should be a place in therapeutics. It is not a complete substitute for malt extract, because the latter is as much a food as a drug, but the addition of taka-diastase to starchy food creates the nutrient elements of malt extract, and in this sense it may be regarded as a substitute.

THRESH'S CURRENT-STEAM DISINFECTOR.

WE reported a few weeks ago that a company had been formed to carry out a new system of disinfection invented by Dr. J. C. Thresh, erstwhile well known as a leading pharmacist, and now medical officer of health for Essex County. The apparatus is intended for disinfecting clothing, bedlinen, &c., which hitherto has been done by steam under high pressure—the only available way, it was supposed, of getting steam above 100° C. But Dr. Thresh, in his new apparatus, takes advantage of the well-known physical fact that aqueous solutions of salines boil at a higher temperature than water alone, and this essentially is the principle of his apparatus. The disinfecter consists of a horizontal boiler, which also serves as a hot jacket round a hollow space which constitutes the disinfecting-chamber, the door of which is at the front. By means of a wheel arrangement at the top a valve



may be turned to admit the steam or to shunt it into the flue at the back. The steam is thus never allowed to accumulate at a pressure higher than the external atmosphere, and it can never be pent up to a dangerous point, since it is always free to escape either into the chamber or directly into the flue. The boiler is filled with a saturated solution of calcium chloride, and upon the boiler is a small ball-cock cistern with a constant supply of water, which feeds the boiler automatically as the solution is concentrated. The saline strength of the boiling solution is thus kept constant, so that the boiling-point never varies. When the exposure to steam is considered sufficient—generally about thirty minutes—the current of steam is shunted into the shaft, and air is induced to enter by opening a valve situated beneath the door of the chamber. The air passes through a pipe immersed in the boiling liquid, so that it is raised very nearly to the temperature of the boiling fluid. The boiler is heated by means of an ordinary furnace, the doors of which are seen in the figure. It has been found by experiment that the calcium chloride has no rotting action

upon the boiler-plates. As to the efficiency of the apparatus we observe that the *Lancet*, reporting upon bacteriological and disinfection experiments, states that thirty minutes' exposure to steam and the same to warm air destroyed the micro-organisms of diphtheria, typhoid fever, cholera, anthrax, and *Staphylococcus pyogenes auriculatus* either as cultures or placed on blankets, books, &c., and in no case was the fabric prejudiciously affected by the heat, or even wetted. The *Lancet* mentions an interesting result obtained when lucifer matches of three kinds—the phosphorus-and-sulphur tipped match (the familiar Tändsticker of the tramp), the wax match, and wooden safety matches—were put in the pockets of some clothes placed in the machine. The steam was turned on only for fifteen minutes. In no case had the matches ignited, although the temperature in the pockets was indicated by thermometers to have been well over boiling-point. Oddly enough, on bringing the clothes into the air and taking the Tändstickers out of the pocket they instantly fired. The wax matches had melted and soaked into the cloth. Even "macintosh" was not injured when placed in the disinfector. As many chemists throughout the country are municipally connected with sanitation, we make this report upon the apparatus, and also for the special interest attached to it. Further information may be obtained from Thresh's Steam Disinfecting Company (Limited), Tindal Square, Chelmsford.

ADEPS LANÆ B.J.D.

As mentioned in our trade-report last week, Messrs. Benno Jaffé & Darmstädter have introduced two new forms of wool-fat, "Adeps lanæ B.J.D.," and the same "cum aqua," at prices about half those of lanoline, yet satisfying the pharmacopœial requirements as to purity. The distinguishing feature of the new anhydrous adeps lanæ is its softness, the melting-point being lower than anything we have yet examined, and the colour pale. It is not more sticky than vaseline or lard. The "Adeps lanæ cum aqua" is also softer, and very white. We think that these two new products will meet with favour. They may be obtained from Messrs. Burroughs, Wellcome & Co.

"TEATFAST" SOOTHERS.

MESSRS. SHIRLEY BROTHERS, 105 Whitecross Street, E.C., have patented a happy improvement on soothing-teats. In the old form of ring-soother the teat is placed on a joint similar to that of a feeding-bottle, with the result that the two parts frequently separated. This disadvantage is now obviated by placing inside the base of the teat a catch, which is secured to a seamless bone ring by means of a stout cord, which cord serves to hang the soother round the baby's neck. The improvement is one of those simple and useful ideas which one wonders have not been carried out before. The improvement is adapted to all soothers from 1*lb.* upwards, and they may also be had with a club-shaped shield, which ensures that when baby has cold in the head she or he may get a supply of air. Messrs. Shirley Brothers nurse this department of their business with an intelligence which must astonish bachelors.

NEW PALATINOIDS.

MESSRS. OPPENHEIMER, SON & CO. (LIMITED), 14 Worship Street, E.C., appear to find no end to the possibilities of the palatinoid and bi-palatinoid forms of medication. The latest products in this department which they send us are 5 and 10 minims of chlorodyne which contain the active ingredients of the specific but not the treacle. In this form

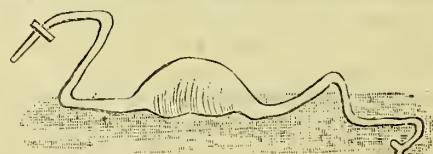
chlorodyne is presented in apportioned doses ready for administration, and yet so securely sealed by the envelope that the volatile principles are insured against evaporation. In a bi-palatinoid of creosote and hypophosphites we have a variety we have not seen before—viz., a liquid and solid separated by the glycerine jujube septum peculiar to the bi-palatinoid. Creosote and hypophosphites bi-palatinoids are intended for administration to phthisical patients, and the whole of the salts present in a teaspoonful of compound syrup of the hypophosphites are contained in one bi-palatinoid. Of course, the liquid and solid medicines do not come in contact with each other until the envelope dissolves in the stomach, and this we find, from actual trial, to be between ten and fifteen minutes after the bi-palatinoid is swallowed, so far as the fact can be judged by the breath.

TROMMER'S MALT-PREPAREATIONS.

SINCE we last reported upon these products, which have been introduced into the United Kingdom through Messrs. Francis Newbery & Sons, King Edward Street, E.C., we hear that they have been judiciously pushed throughout the country, and have been taking well in several districts. We have now had three new preparations submitted to us, and we again find that they are made with an extract of malt of exceptional diastasic value. The extract is manufactured from Canadian barley malt, and is characterised by its fluidity and rich diastasic odour and reaction. The new combinations are extract of malt with cod-liver oil, containing 40 per cent. of Norwegian oil, which may be obtained with or without hypophosphites—there is also a preparation containing in each tablespoonful 2 gr. of hypophosphate of lime and 1½ gr. of hypophosphate of soda without cod-liver oil—and a malt extract with pepsin, which is particularly suited for certain cases of gastric feebleness, is also made. Messrs. Newbery & Sons hold stock of these preparations, and will supply any chemist who applies for it with a pamphlet bearing an admirable portrait of Professor Trommer, whose work on sugar testing was directly the origin of this particular form of malt extract.

AN ENEMA-SYRINGE CUPBOARD.

MR. FRED. REYNOLDS is rapidly becoming an enema-specialist. His latest invention in this department is a long cardboard box, which keeps the enema stretched out, and as one end of the box is double the outer flap can be used as a tag to hang the box up. There is a bottle at the other end to catch the drops. The engraving at the side of this note shows what the cupboard looks like. It retails at 1*sh.*, and can be obtained from Messrs. Reynolds & Branson, of Leeds. On a handbill about the cupboard there is a figure of a most dissipated-looking syringe, which shows to what depths of



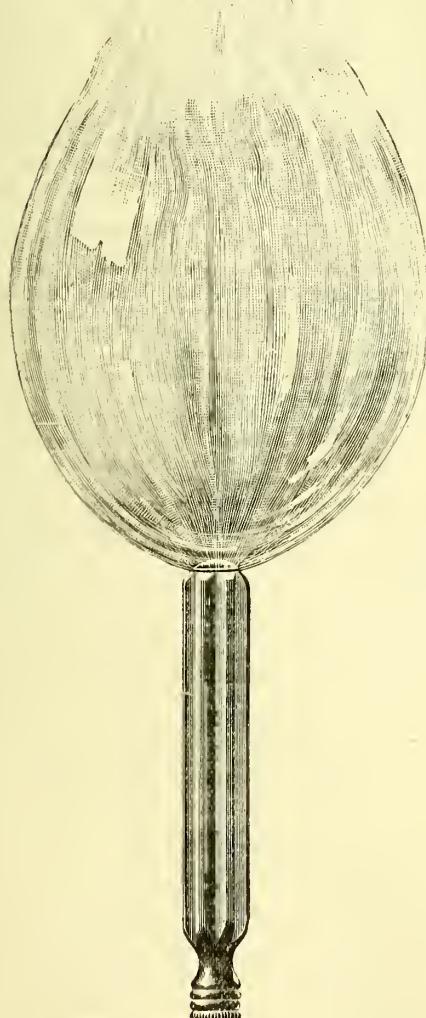
depravity a useful instrument may come to if not properly cared for. We reproduce this woeful example.

TOILET-PREPAREATIONS.

MESSRS. F. NEWBERRY & SONS have introduced an admirable line of brilliantine, "St. Paul's" brand, in various individual odours, such as white rose, Jockey Club, lily of the valley, &c. It is put up in rounds and squares, with sprinkler-tops, to retail at 1s, and a sixpenny size in corked rounds appears to us exceptional value. They have also brought out a new lavender-water, entitled "Sweetest Lavender." This is put up in green Lubins with sprinkler-top, the whole being in elegant style, while the lavender is a particularly good one.

THE BALL-NOZZLE ON SYRINGES.

SOME time ago an American gentleman—Mr. Chas. V. Pollock, of Des Moines, Iowa—was working in his garden, and accidentally a little ball got fixed at the end of his



water-hose; he turned the water on to get the ball off, but there the ball stuck. Instead of giving the hose-pipe a good shaking, as any ordinary person would have done, in order to get rid of the ball, Mr. Pollock watched the peculiar effect produced at the end of the hose. There was a

beautiful palmate sheet of water going all over the grass, and as the observer walked along to the end of the hose-pipe, with the rubber in his hands, he found that the ball still stuck to the pipe although it was upside down, and it stuck there as long as the water flowed. When it stopped, down dropped the ball. Being an American, Mr. Pollock thought hard, and got the Patent Bureau at Washington to protect his ideas. This is the history of an invention. When a canny Scot dropped into our office the other day, produced from his pocket a tiny metal funnel with a piece of rubber tubing attached to the stem, and, inverting the funnel, placed an ebonite ball in it, and said, "You'd think when I blow through this tube that the ball 'll blow down," we admitted that was about our way of thinking. Whereupon he blew, and the harder he blew (which racial peculiarities in music made him an adept at), the harder the ball stuck to the funnel, gyrating like a living thing. "That's the principle of the ball-nozzle," said he. "We have applied it to fire-hose, garden-sprinklers, window-cleaning syringes, and many other purposes. I come to you to speak about its application to enemas." We heard the story, and have tried the ball-nozzle syringe to see how it discharges liquid. The accompanying illustration does not exaggerate the discharge, for when the pipe is held horizontally water issuing from the end of it forms an egg-shaped sheet about 4 inches in length; held vertically upwards or downwards, the egg decreases in length and increases in diameter. One cannot doubt from this description that for uterine douches this form of pipe is as near the ideal as can be imagined, and as the ball is inserted within the end of the pipe it cannot be lost. We understand that such enema syringes have taken well in the United States. The company supply them as fountain douches, which are produced in first-class style. Further particulars regarding them can be obtained from the British American Ball Nozzle Company, 52 Oxford Street, W., where the various forms of the ball-nozzle may be seen in action. We should think that there is a great future for the invention.

Perloids. MESSRS. KEENE & ASHWELL, 74 New Bond Street, W., have published a tiny price-list of perloids which shows that they have practically the whole of the commonly used homœopathic remedies in this improved form. The list shows the strengths obtainable, and how the perloids are packed.

Celladema. THE CELLADEMA COMPANY, East Grinstead, are the manufacturers of two veterinary preparations, ointment and blister, which appear to be highly spoken of by those who ought to know a good thing—for example, Mr. P. J. Rumney, the proprietor of Ridge's Food, and one of the best four-in-hand drivers in England, says that "Celladema acts very satisfactorily," and several doctors speak as favourably of the remedies. Apparently they are articles which chemists should stock. They are well advertised.

Warner's MESSRS. WM. R. WARNER & CO., of Philadelphia, have obtained quite a reputation for the business-like information which they give medical men, and there are few things so convenient as their "Therapeutic Reference Book," a new edition of which shows us that they keep the information well up to date. It very largely consists of prescriptions for specific complaints, the remedies being exhibited in one or other of the forms which Messrs. Warner manufacture, but there is no fulsome recommendation of their manufactures, and if medical men have minds of their own they can choose. A number of useful tables are contained in the book, copies of which for judicious distribution can be had from Messrs. F. Newberry & Sons.

Bromo-seltzer. THE Board of Inland Revenue have reversed a previous decision in regard to Emerson's Bromo-seltzer, and now require it to be stamped. Mr. J. Morgan Richards, the British agent, 46 Holborn Viaduct, offers to exchange any unstamped for stamped goods, charging the cost of the stamps.

Consider IT looks like a proverb, and possibly that is the Pig. what Mr. Stephen Willson, of Peterborough, means it to be. He has considered the animal to good purpose, for his Canadian pig-powders are so good for the "jintleman that pays the jint" that better bacon ne'er came from the market than the kind that same jintleman gives.

Elastic MR. VINCENT WOOD, 3 St. Andrew's Street, Hosier. E.C., informs us that he is now manufacturing elastic hosier in London, so that he has now five factories devoted to this industry—viz., Russell Street Mills, Nottingham; three at Carlton, near Nottingham; and the new place in London. The effect of this extension is that Mr. Wood has adopted the business motto "Special orders by return."

Chiropodyne. MR. E. A. HOLLOWAY, of Torquay, is supplying a novel corn-paint on the non-cutting principle. Now that that sentence is down we may add that it cuts both ways—i.e., those who use this corn and wart paint do not require to cut the corns, &c., and those who sell the Chiropodyne must not cut the price. It seems to us a good thing, quite different from the green stuff which everyone is now familiar with, and it is neatly put up.

MESSRS. BAYLEY & Co., perfumers, formerly Bayley's Removal of "The Old Civet Cat," Cockspur Street, have removed their dépôt, showrooms, and offices to larger premises, 95 St. Martin's Lane, Charing Cross, W.C. The retail business has, at the same time, been given up. The firm will open this month a new bounded warehouse and laboratory at "I" Wharf, St. Katherine's Docks, where goods for export will be put up. The factory, distillery and warehouse for inland trade remain at 13 Warwick Street, Cockspur Street.

Newberry's IT is entirely through the courtesy of Messrs. Newberry & Sons that we are able in this issue to refer to the new price-list which they will have ready for distribution in a few days. In this new edition they have done a further service to the trade by a more complete dissection of the poisonous proprietary medicines, marking those which are poisons in the first part of the schedule "P 1," in the second part "P 2," and those which do not contain scheduled poison but are labelled poison "P.n.s." The last class includes such as carbolic acid, but there are very few in it. Messrs. Newberry have been assisted in the compilation of this useful list by the manufacturers, who show greater readiness to assist than has been the case hitherto.

Fordham's "ANYTHING from a needle to an anchor Catalogue. you can get at Fordham's" is the rule in the hardware trade, and if we may judge from the new illustrated catalogue which W. B. Fordham & Sons (Limited) have published this week, it is a very cogent rule. To go no further than the present issue, we may say that what May, Roberts & Co.'s catalogue is to the druggists' sundries Fordham's catalogue is to domestic sundries. It is a large quarto volume extending to over 400 pages, few of which contain fewer than half a dozen illustrations, and a mere glance through it shows lots of things which druggists buy and sell, e.g., knife and other polishing powders, "Enterprise" apparatus, bronchitis-kettles, paints of all kinds, disinfectants, soaps—but it would be easier for us to get Messrs. Fordham to distribute the catalogue through THE CHEMIST AND DRUGGIST than to name all the articles in it which chemists and druggists stock. We do not suppose the firm scatter the catalogue broadcast, but we take it that any retailer or wholesaler doing business with them will get a copy on application.

The Winter Session.

CHEMICAL SOCIETY.

As moths to a candle, so the metropolitan Fellows of the Chemical Society gather round the gas-flame. For, since Professor Smithells, of Leeds, came into the field of debate in opposition to Professor Vivian B. Lewes, the Fellows have learnt that they may always expect to see brilliancy of experiment and wit when these antagonists take up the running. Thursday evening of last week was no exception. It was Professor LEWES's turn, and he had come forward with a paper on

THE ACETYLENE THEORY OF THE LUMINOSITY OF HYDROCARBON FLAMES.

Perhaps it may make things clear to those who do not follow such matters closely if we explain what the acetylene theory is. This is the name which Professor Smithells has given to Professor Lewes's explanation of why a gas-flame is luminous—viz., that certain hydrocarbons present in the gas undergo molecular change resulting in the formation of acetylene, C_2H_2 , and the latter, breaking up by endothermic action [$C_2H_2 = C_2 + H_2$] gives innumerable atoms, molecules, particles, bits (call them what you like, says Professor Lewes) of carbon, which, in the intense heat of the burning gas, become incandescent and give us light. That, according to Professor Lewes, is fact; according to Professor Smithells, theory. In a paper by the latter, reported in THE CHEMIST AND DRUGGIST, November 16, 1895, page 735, it is denied that the gas-flame shows any evidence of such endothermic change as is necessary to support the acetylene theory, and, generally, the alleged inaccuracy in Professor Lewes's experiments, while he attributed the luminosity of flame to gaseous carbon.

The demonstration of last week was apparently a reply to the November paper. Professor Lewes began by stating that the endothermic reaction, which he dealt with fully in a paper communicated to the Royal Society, was not really new with him, for in 1882 Professors Dewar and Living had said practically the same thing, and he has also found that a French gas authority in 1884 gave evidence of it. Acetylene unquestionably does decompose at a high temperature, and, in absence of oxygen, with evolution of luminosity. He showed this experimentally. Taking as a burner a hard glass tube placed horizontally and connected with a bell-jar of acetylene gas, he ignited the gas at the open end of the tube, where it burnt with an intensely luminous and smoky flame. This was turned down low and allowed to burn while a sheet of Bunsen flame played upon the glass tube, heating it to redness. When a temperature of 800° C. was reached a spot of bright light appeared in the interior of the tube, the end-flame still burning undisturbed, showing that there was no entrance of oxygen. Gradually, however, the tube became blocked up with soot from the interior flame, and ultimately both flames expired.

The next point of the paper dealt with Professor Smithells's criticism of the author's flame-temperatures. These had been taken with a thermo-couple, and some of them were higher than the melting-point of platinum. As platinum-wires are the connecting-links between the couple and the galvanometer, Professor Smithells asked "How can these things be?" "Simple enough," replies Professor Lewes. "I do not say the temperatures are absolutely accurate, only approximately so. I have found evidence of fusion on the surface of the platinum wires under the deposited carbon, but that does not extend throughout. You only require a fraction of a second to register the temperature. So it's just like dipping a wax candle into boiling-water—you may melt the surface of the candle, but not the whole of it." This had reference to the temperature of the zones of flame, and later in the evening brought out an interesting statement from Professor Rucker.

The author then entered upon a fresh field of debatable ground—viz., a new method of estimating the temperature of the flame. Taking an ordinary lamp-glass, fixing it in a cylinder of water and burning in the glass a gas-flame of known luminosity (the rate of the gas-supply also being known) the temperature of the water attained during a known period may be ascertained, and from that the amount

of energy evolved calculated. Then, by blacking the outside of the glass, the radiant energy is kept back, and it is found that in the same time the water does not reach the previous temperature. This, explained Professor Lewes, is because we keep back the light or radiant energy which is not converted into heat—an explanation which some of the audience received with incredulity.

The last matter dealt with was cyanogen flames. Professor Lewes says the luminosity of such flames is due to carbon; his opponent says it is ammonia. Thereupon Professor Lewes exhibited cyanogen burning with hydrogen and with oxygen, and finally with nitrous oxide, the last flame being an intensely luminous one—so pretty that the Fellows received it with applause. Here there could be no ammonia, but Professor Lewes put a porcelain dish over it and got a thick deposit of soot. "Surely that will satisfy you, if not Professor Smithells, that carbon is there," and with this sentence he returned to his seat, having with his excellent lecturing style and ready wit kept his audience merry for forty minutes.

Professor SMITHELLS then had as long an innings, but it is unnecessary to report his speech in detail. It was entirely controversial, and chiefly aimed at scoring off Professor Lewes; occasionally he was successful, especially in his repeatedly ascertaining from Professor Lewes that points not mentioned in the demonstration were dealt with in the paper. He also scored in a funny exposition of the calculations whereby, he said, Professor Lewes had come to the conclusion that acetylene is three hundred times stronger than coal-gas, the argument being that the calculations were based upon an arbitrary factor, and that the choice of another factor would bring out acetylene as a few thousand times stronger than coal-gas.

Professor RAMSAY asked Professor Rucker to state whether the heating of the platinum wires would effect the record of the thermo-couple.

No, replied Professor RUCKER; how far the melting of the platinum will affect the current passing from the couple to the galvanometer we do not know exactly, but, he pointed out, the statements made regarding the conditions of the experiment showed that the temperature of the thermo-couple was not equal throughout, so that the record could be approximate only. He reminded Professor Lewes that the black surface in his lamp glass would radiate heat as well as light, and he could not imagine that his experiment in that way deserved the importance attached to it.

Professor THORPE thought that the acetylene theory was older even than Professor Lewes said. His impression was that Smithson Tennant spoke of it early in the century.

Professor LEWES having replied, and described his conception of the structure of flame, Mr. VERNON HARCOURT closed the discussion, letting fall a practical suggestion in regard to the carbon luminosity. He said: The carbon filament of an incandescent electric light can be measured as to surface, and the photometric value of the light can be determined, and compared with a gas flame. Assuming that the luminosity of the latter is due to exceedingly fine particles of carbon, we may be able to estimate how much of it is present in the flame by deduction from the carbon surface and photometric value of the electric light, and so be able to ascertain whether the actual and theoretical carbon-values of the flame are identical or not.

Before the meeting adjourned Professor DUNSTAN read the titles of the following papers:—

"The Action of Sodium Alcoholate on the Acid Amides." By J. B. Cohen, Ph.D., and W. H. Archdeacon, B.Sc.

"Note on the Electrolytic Conductivity of Formanilide and Thioformanilide." By T. Ewan, B.Sc., Ph.D.

"Action of Sugars on Ammoniacal Silver Nitrate." By James Henderson, B.Sc.

"Solution and Diffusion of Certain Metals in Mercury." By W. T. Humphreys.

"On some of the Ethereal Salts of Active and Inactive Monobenzoyl, Dibenzoyl, Diphenyl Acetyl, and Dipropionyl-glyceric Acids." By Professor Percy Frankland, F.R.S., and J. MacGregor, M.A.

"On the Rotation of Optically Active Bodies in Organic Solvents." By Professor Percy Frankland, F.R.S., and R. H. Pickard, B.Sc.

"The Action of Hydrogen Chloride on Ethyl Alcohol." By J. C. Cain, D.Sc.

"Transformation of the Alkyl Ammonium Cyanates into the Corresponding Ureas." By Professor Walker, D.Sc., and James R. Appleyard.

PHARMACEUTICAL CHEMISTS' AND APOTHECARIES' ASSISTANTS' ASSOCIATION OF IRELAND.

A LARGELY-ATTENDED meeting of this Association was held at Dublin on January 17, Dr. Walsh, L.R.C.P. & S.E. (proprietor of Messrs. Graham & Co.'s State pharmacy), in the chair.

Mr. D. O'SULLIVAN, L.P.S.I., Assistant Hon. Secretary, read a letter from Mr. A. T. Ferrall, Registrar to the Pharmaceutical Society of Ireland, explaining that the letter sent by the Association to the Society on December 31, applying for accommodation in the Society's house for the meetings, not having been received sufficiently early to appear on the printed programme for the Council at its January meeting, the application must be postponed till the February meeting.

Mr. HUNT, L.P.S.I., then read a paper on

THE MODERN PHARMACIST AND HIS POSITION.

Mr. Hunt said that at a recent meeting of the Association an anonymous paper on "The Duties and Responsibilities of the Chemist" was read, and it struck him that it contained many valuable suggestions and statements on a subject the importance of which, he believed, was not sufficiently realised. He urged that from a purely selfish point of view, apart from any other considerations, the pharmacist had sufficient inducements to make the examination and testing of his drugs a systematic rule. They were at present trying to impress upon the public the responsibility and importance of the position held by the pharmacist, and he believed if it was generally known that the chemist followed this rule with regard to his drugs an intelligent public would readily acknowledge that he was something more than a mere retailer of drugs. In dispensing the discretion and judgment of the pharmacist were implicitly relied on. In the case of incompatibles in prescriptions he held that the pharmacist was justified in taking reasonable steps to prevent incompatibility, of course always bearing in mind that therapeutic activity should never be sacrificed for the sake of producing a more presentable mixture. But where the addition of some inert substance would make a more presentable mixture, pill, or emulsion, as the case might be, be thought it was allowable to make it, or if it had been overlooked by the prescriber, he should, if possible, be communicated with. Some medical men, it was known, resented the slightest interference, even of the most trivial nature, with their prescriptions, but this class was not a large one, and the majority of medical men, especially those of the modern school, were very glad to avail themselves of the experience of the pharmacist in producing a compatible mixture. On the question of the indiscriminate repetition of prescriptions by the patient without the directions of the prescriber, he thought that in the cases of morphine, cocaine, and other unfortunate habits, the list of which was increasing, the responsibility of the chemist was a grave one, and one he should make up his mind upon with no uncertainty. In any case in which he had the slightest suspicion that a patient was developing the cocaine or morphine habit it was criminal if he did not at once take steps to check the evil by communicating with the physician, or in any other way which his tact and common-sense suggested. The Sale of Poisons Act was sometimes alluded to sneeringly as an Act for the protection of the chemist. This was governed by written laws. But there were dozens of unscheduled poisons of varying degrees of danger, which, he believed, few chemists sold without first satisfying themselves that the purchasers understood the use of them. He believed that accidents and loss of life were frequently averted by the watchfulness of the chemist, and as a matter of common justice the chemist was entitled to the monopoly of the sale of all poisons. They could not read the current drug-trade literature without observing the earnest advice and criticism lavished on the present-day chemist. One of the most serious of the topics treated was the patent-medicine trade. It was of little comfort for the chemist to know that he himself had, to a great extent, tenderly reared this monster which now threatened to crush him. The attitude of the chemist towards patent medicines should be one of unflinching opposition. Why should he push the product of another man's brains for a merely

nominal recompense? With very few exceptions the great bulk of patent medicines had not the merit of pharmaceutical elegance, and of their therapeutic value the less said the better. Surely if the chemist found there was a want for some popular remedy he ought, from his experience, to be able to supply that want; and if unable himself to do so, he could obtain the assistance of the highest authorities in pharmacy and medicine, and he thus able to put upon the market an article the composition and value of which he could speak of with confidence. Of course, patent medicines must be stocked, and when asked for they should certainly be supplied without seeking to substitute any other article for them. But he would not think of exposing them to tempt a possible purchaser. Another phase of this evil was the number of proprietary preparations emanating from the wholesale houses, which the chemist was compelled to stock. He was not surprised at the medical profession taking up these preparations so readily. In many cases, by a useful combination of drugs put up in a palatable form, they met a want. But the evil was injurious alike to the physician and the pharmacist—to the former by making prescription-writing a lost art, and to the latter by reducing his profits to a minimum; the manufacturer got the oyster, while the chemist had to be content with the shell. The chief obstacle which retarded the progress of the present-day pharmacist was the want of originality in conducting his business, and also his extreme conservatism. The lack of originality was specially noticeable in the circulars, pamphlets, and advertising matter issued by most chemists: they all seemed to be modelled from the same pattern. A similar state of affairs existed in the arrangements and fittings of most pharmacies, and in the window-dressings it could be seen at a glance how slow he was to adopt any improvements or innovations. But most serious was the training which the pharmaceutical apprentice received. He has to cope with an entirely new order of things, and to undergo an examination of increased severity; yet his training was much the same as that of his predecessor of forty years ago.

In the course of the discussion, Dr. WALSH, M.P.S.I., deplored the practice of obliterating one's pharmaceutical prestige by becoming practically advertisement agents. But he thought it bad policy to drive any portion of their business to the grocer. It was bad judgment to let the public know how much or how little profit they had on their sales of patent or other medicines. He feared, as things stood at present, there was no avoiding the repetition of prescriptions. If a customer were refused the repetition he goes straightway to the next-door chemist, and gets the mixture. The only way to combat the evil was for the whole trade to unite as one man; and as the higher education of the chemist proceeded the less difficult would become the combination. They wanted a more friendly feeling amongst chemists in general. Their Association was doing valuable work in this direction, and the higher education of chemists would do much to give a broader view. Petty jealousies would vanish, and hand-in-hand they would be able to fight the unqualified sellers.

THE MIDLAND CHEMISTS' ASSISTANTS' ASSOCIATION.

ON Wednesday, January 15, at Exchange Rooms, Birmingham, the first half of a paper on "Coal, in Relation to Pharmacy" was read by H. JESSOP. The paper dealt especially with the manufacture of coal-gas, and described minutely the principles involved and apparatus used. The second portion of the paper (which will have a more direct bearing upon pharmacy) will be read on February 19.

FEMALE CUSTOMER: "How do you sell your lime-juice and glycerine?" Assistant: "One and sixpence a bottle." F.C.: "One and sixpence for that bottle? Why, I can make a pint for that money; lime-juice is only one shilling a bottle and glycerine two shillings a pound." Assistant: "But we don't make it that way; it has other things in." F.C.: "That will do; just give me a bottle of lime-juice and one shilling's worth of glycerine and I will make it myself."

Personalities.

MR. WM. PARKER HOARE, chemist, has been elected a member of the Cromer Urban District Council.

MR. WM. CUMMING, chemist and druggist, Thurso, has been re-elected Grand Master of the local lodge of Oddfellows.

MR. E. C. CALM, chemical-merchant, of Cedar Street, New York City, is in London this week on a business trip to Britain and the Continent.

MR. W. KIRKBY, of Messrs. Jewsbury & Brown, Market Street, Manchester, has been elected an honorary member of the Manchester Medical Society.

MR. HENRY JENKINS has succeeded to the management of Messrs. Allen & Hanburys (Limited) West-end dispensing establishment at 7 Vere Street, Cavendish Square.

MR. W. SHEPPERSON, the principal of the Liquor Carnis Company, is on the Riviera making a business survey. Up to February 5 letters will find him at the Grand Hotel, Nice.

MR. CHARLES LE SUEUR, chemist, Jersey, who is also prominent in the cycling world, has just branched into a new business by opening "The West-end Cycling Academy and Sale-rooms" in Cheapside, St. Helier.

THE appointment of Scientific Adviser to the Trinity House, which has been in abeyance since the resignation of Professor Tyndall, and which was formerly held by Professor Faraday, has been revived, and has been accepted by Lord Rayleigh.

MR. J. W. GOVAN, who has for about three years been manager of Brown & Co.'s pharmacy at Hatton, Ceylon, has returned home and proposes starting in business for himself, probably in Scotland. He is succeeded in the management of Brown's pharmacy by Mr. Shand.

WE have had a call from Mr. Frederick Thornley, pharmaceutical chemist, late of Ripon, who leaves this week for Melbourne, where he will join Messrs. Burroughs, Wellcome & Co.'s Australasian staff. Mr. Thornley has already been out to Australia on a visit, and he found the climate of so much benefit to his health that he thinks now of residing there permanently.

MR. CHARLES HOLLOWAY, a brother of Mr. E. A. Holloway, chemist, of Totquay, has just come over from the States on a visit for two or three months. He was an apprentice with Messrs. Chase & Jackson, of Hereford, fifteen years ago, and after following American pharmacy for a year or so he settled, some seven years since, in Leadville, Colorado, to the more remunerative occupation of gold and silver mining.

MR. H. S. WELLCOME, of the firm of Messrs. Burroughs, Wellcome & Co., has consented to hear the additional cost of forming a chemistry class in connection with the Dartford (Kent) Science and Art Committee. This will afford the many young persons employed at the works of Messrs. Burroughs, Wellcome & Co. at Dartford an excellent opportunity to study chemistry.

MR. JAMES D. LEVER, of Lever Brothers, Port Sunlight, is lying seriously ill at his residence near Thornton Hough. Mr. Lever has been ill for some time, and upon him latterly has fallen the chief responsibility of conducting the business over which he and his brother, Mr. W. H. Lever, preside. Mr. W. H. Lever is expected to return shortly from an extended American and Australasian tour.

FOLLOWING the example of their late father, Messrs. William and Charles Fox, chemists and druggists, of Bethnal Green Road, have for many years entertained the workers of the Spitalfields Tabernacle to a quarterly tea and social gathering, and lately an opportunity occurred to pay a return compliment. From a photograph of Mr. Fox, senior, two excellent enlargements were produced, and these, with two large photographs, beautifully framed in oak and gold, of the Rev. W. Cuff, Pastor of the Tabernacle, were last week presented to the brothers Fox at a meeting of the workers of the Tabernacle after a collation provided by the photographer, Mr. J. Wien.

Disciplinary Chambers of Pharmacy.

INTERVIEWS WITH PARISIAN AUTHORITIES.

THE Disciplinary Committee of the Paris Syndical Chamber of Pharmacy having now been in working order long enough to be able to justify its existence, a *C & D.* representative addressed himself lately to the Secretary to obtain some details. The pharmacy of M. Deglos is a little old-fashioned two-storey building in the Boulevard Montparnasse, conspicuous among the tall white houses which surround it. Its low-pitched tastefully-painted ceiling and modest air suggest the times of our grandfathers; but the inscriptions "Anti-Diphtherie Serum," "Fournisseur aux Postes et Télégraphes," "Cie. Générale des Voitures," "Cie. des Omnibus," on the front of the pharmacy, and the heap of reports and magazines of medicine and pharmacy on the table of the sanctum behind, tell of modern activity. A busy man is M. Deglos, with the physique of a Lifeguardsman and a look of robust health, partially explained perhaps by the trophy of alpenstocks and chamois-horns over the mantel.

"As to the Disciplinary Committee," he explained, "you must understand that this is only one of the ramifications of the Chambre Syndicale. We used to have our meetings at the Hôtel des Sociétés Savantes, that large building in the Rue Serpente, just off the Boulevard Saint-Germain. But the School of Pharmacy having offered us their hospitality, our monthly reunions will in future be held there."

"Are reporters admitted?" asked the *C & D.* man.

"No; our proceedings are strictly private, discussing as we do matters which affect the honour of the confraternity. We are twelve in number. I am Secretary of the Chambre Syndicale, and also of the Disciplinary Committee. M. Vigier is President of both bodies, and M. Rièthe Vice-President. The other nine members are elected by the General Assembly of the Chambre Syndicale, and three are re-elected each year. Among the present nine we number M. Boymond and M. Schmidt, familiar figures at the meetings of the Society of Pharmacy. Yes, I belong to the Society, but I don't often go. Really, you know, these meetings take up a lot of time, and one must be sometimes in one's pharmacy. No, I am only Secretary for two years, unless re-elected. M. Rièthe sits for two years also, but the President is re-elected every year. The Chambre Syndicale itself consists, with a few exceptions which I need not explain, of all the pharmacists practising in the department of the Seine. So we are, you see, elected by all those whose interests we protect and whose abuses we repress."

"Do these Disciplinary Committees exist in other departments?"

"Only at Lyons and Bordeaux; but they will come. We only really started ourselves in a regular way two years since."

"And you think that real services are rendered to the profession sufficient to justify the creation of new bodies?"

"Yes. Of course, in thinly-populated departments the Committee need not meet every month. It might be a quarterly affair, if there were not much to do."

"And your functions?"

"To repress the illegal exercise of pharmacy, and to check the adulteration of drugs. Of course, in these days of cut-throat competition there is a great temptation to lower quality or stoop to dishonourable practices—and there are black sheep in every profession. We endeavour to repress such practices, where possible, without legal proceedings. For instance, when a complaint is made, we get a similar prescription made up by the pharmacist in question, and submit it to very careful analysis. If we find, as often happens, that the inaccuracy has only been an assistant's error, or some pardonable slip, it may be passed over. But if we consider the pharmacist is to blame, we write and advise him of the fact, and the complaint is entered upon the minutes of the Committee. If a second offence takes place within two years, we pass a vote of censure, and write to the offender a severe letter, threatening legal proceedings if such practices continue. The third offence is submitted to the Council of the Chambre Syndicale, and if it is considered that a conviction can be obtained legal action is taken."

"And in very flagrant cases do you keep to this procedure?"

"No; in such cases we omit the two warnings, and proceed at once. But very clear evidence of fraud is necessary before taking so grave a step."

"And does the Committee do anything to counteract the 'cutting' of which so many complain?"

"Well, we keep an eye on anyone who sells at very low prices; but if his drugs are pure, we can do nothing. There is no law to prevent a man selling at low profits, or even without profits; or even giving away his goods, if he likes. That is his own business."

"Do your powers extend outside Paris?"

"Yes, we have all the department of the Seine; but nothing beyond."

"You have also a provident society at the Chambre Syndicale?"

"Yes; that is a fund for necessitous members of our Society, their widows, and orphans. Sometimes we help non-members and assistants. This is within the discretion of the Council. In doubtful cases an inquiry is made by two members of the Society before funds are voted. But if you want any further details as to the Chambre Syndicale or Committee of Discipline, here is our Vice-President's address. I am sure he will be pleased to give you any information."

M. Deglos' minutes were evidently counted, and the *C & D.* man withdrew. M. Rièthe's pharmacy, Rue Grange aux Belles, is at the other side of Paris, but two miles of wide boulevard, straight as an arrow, considerably facilitates the journey. M. Rièthe was equally courteous, and less pressed for time.

"There are two other Disciplinary Committees in France, to my knowledge," said he; "one at Lyons, and one at Bordeaux. I fancy the Lyons Committee is older than ours; the Bordelais is more recent, but they have done some work. They had an adulteration affair in 1893, I remember, which raised an interesting point of law. As M. Deglos explained to you, the Chambre Syndicale is the prosecuting party in these cases, and finds the funds. The question was whether the Chambre could, as representing the body of pharmacists in a certain department, claim pecuniary damages for fraud from an individual pharmacist. The Bordeaux Committee won their case in the local court; but the Court of Appeal reversed the decision. However, they carried the case to the Court of Cassation, and this, the biggest tribunal in France, ruled that, the fraud causing harm to the whole body of pharmacists, they had a right to receive damages."

"So you have good precedents to go upon. Do you often prosecute?"

"As little as we can. You know that law is slow, and by no means sure. And then we have to get exact information, and here in France, as in England, informers are looked down upon. We had sixteen complaints last year, and only two of them were from pharmacists. We have really to do all this business ourselves. Of these complaints ten were found to be unimportant or insufficiently proved. In three cases we 'advised' the pharmacist; in one we sent a formal complaint and menace of proceedings; the other two we are following up legally. Oh, it's a very difficult matter, and especially with all these new medicaments every year."

"But you have inspectors of pharmacy. Do they not help you?"

"Well, to tell you the truth, they are often retired pharmacists or teachers of pharmacy themselves. They are honest and active enough in their way, but what can they do? They walk into the pharmacy, and most likely see one of their old pupils or assistants behind the counter. It is 'Good morning' and shake hands, an inquiry as to business, whether there is any herbalist unduly exercising pharmacy round the corner, &c. No, it isn't like that one can check abuses. One must go into the cellar and the back room to see where adulteration goes on."

"And the Courts, they support you, of course?"

"Oh, the Courts are well enough, but what quibbles and hair-splitting! I will give you an instance. Some time ago we found a multitude of small refreshment-sellers and wine-shops selling quinine wine, and we prosecuted a batch. You would never guess the view the Court took. It condemned those whose wine contained more than a certain percentage of quinine; so that the honest men,

who sold the article they advertised, were fined, while those whose wine only contained a minimum of quinine, and who were therefore cheating the public as well as infringing the Pharmacy Acts, got off scot free! These are gems of legal decisions which a mere layman fails to appreciate. Then the question of analysis is very difficult. One may get a dozen drugs in one prescription. Yes, the School of Pharmacy put their skill at our disposal; but they are important people, and we have to be careful not to abuse their good nature too much, or they would get tired of our importunities. But adulteration is only one thing that the Coambre Syndicale attacks. As you will have seen from the quinine-wine incident, we fight against the illegal exercise of pharmacy. The herbalists are the chief offenders. We caught thirty-one of them last year; but you must not imagine this represents all the offenders. Half of them and more slip through our fingers. There is the unproved case, the long delay, the damages awarded by the court, but never paid by the insolvent or departed defendant, and the Magistrate who considers us rather a troublesome set of people, who cannot 'live and let live.' Last year eleven of our cases were found, after diligent inquiry, in the portfolios at the Prefecture, endorsed 'Put aside; not to be followed up' ('Classé sans suite'). And why? Because they were unimportant for the profession or insufficiently proved? Not at all; they were all of interest, and had been received and carefully studied, most of them, at the School of Pharmacy. They had been put aside at the good pleasure of the magistrate appointed to examine them. He doubtless thought our profits were large enough to allow us to let a swarm of unqualified persons step in. The Council did not share his views, and have taken steps to proceed with the matters."

After a further interesting chat with M. Rièthe the C. & D. representative took his leave. It may be added that M. André Pontier recently brought forward a proposition at a meeting of the Syndicat des Pharmaciens de la Seine, of which he is Honorary President, urging the necessity of extending the system of Disciplinary Chambers. He said: "We must have them everywhere, and the organisation of a technical committee, composed of professors of the various schools of pharmacy, would give powerful aid to the development of these disciplinary committees in connection with pharmaceutical syndicates." A vote was taken in favour of the proposal, and it was decided to bring the matter before the General Association of Pharmacists of France, M. Rièthe being asked to take it in hand.

Handy Reckoning.

By WALTER J. CHURCHILL.

THOSE who have travelled in France, and used her heartily simple metric system, with its natural gradations in tenths and hundredths, and her coinage running side by side with her weights and measures, must have wondered at the patience of British men of business who have put up so long with our confused systems—one set of goods being divided into 20ths and 24ths, another into 112ths and 16ths, while the Stock Exchange, the hub of British business, divides our sovereign not into 20ths, but into 4ths, 8ths, 16ths, and 32nds, and the pharmacist has to divide an ounce into 437½ grains.

Sugar lately rose 4d. per ton, but if she read this, scarcely one English housewife knew that this meant almost ½d. per lb., while Madame Bonhomme would see at a glance that a rise of 140f. per 1,000 kilos. would mean 14c. per kilo.

Until in the far future we have a decimal system of weights and measures, together with a decimal coinage, we must be content to go on dividing the price of a hundred-weight by 112 and of a pound by 16; but as this is cumbersome, and such calculations have often to be made face to face with a customer, it is well to have some simple rules for getting the result by a shorter cut.

Hundredweights to Tounds.

In reckoning the prices of these we first note that—

1d. per lb.	is 9s. 4d. per cwt.
2d. "	18s. 8d. "
3d. "	28s. 0d. "

and so on; but for prices which do not run in these simple figures—say, 40s. per cwt.—

$$\frac{40 \times 12}{112} = \frac{40 \times 3}{28},$$

but 28 can be broken into 7 × 4, and we may say—

$$\frac{40 \times 3}{7} = 17\frac{1}{7} \text{ farthings} \div 4 = 4\frac{1}{4} \text{ d. per lb.}$$

Hence the rule—

Multiply the price per cwt. in shillings by 3, divide by 7, and find the result in farthings.

—the mental reduction of farthings into pence effecting the division by 4.

Pounds into Ounces.

The price of an ounce comes still more readily—say, at 5s. 6d. per lb. :—

$$\frac{5\frac{1}{2}s. \times 12}{16} = \frac{5\frac{1}{2}s. \times 3}{4} = 16\frac{1}{2} \div 4 = 4\frac{1}{4} \text{ d.}$$

Therefore the rule is—

Multiply the price per lb. in shillings by 3, and see the result in farthings.

Cost per Drachm.

Many apprentices, and some seniors, are under the impression that it is safe to divide the cost per oz. by 8, but the commercial ounce, being avoirdupois, is most nearly divided by 7½; but for rapid reckoning for selling, it is sufficient to divide the price per oz. by 7 to get the cost of 3j. (60 gr.).

26s. per oz. is close on 1d. per gr.

18s. " " ½d. "

Oil-silk, sponge-piline, and some plasters may conveniently be sold at a fraction of a penny per square inch—say, a piece 10 by 10 inches at 6d.—

$$\frac{10 \times 10}{6} = 16\frac{2}{3} \text{ d.}$$

For dispensing bottles of medicine, ordered by the single dose, some narrow minims measures, about 5½ inches high, graduated from 5 to 300 minims (by 5 up to 60, then by tens), were made for the writer by the York Glass Company. They have become *sinc quā non* at the dispensing-counter.

A set of weights ranging up to 1,000 gr., or even higher, is very useful in working out multiples of any recipe, saving the reduction of grains into ounces.

Since medical men are becoming more and more in the habit of ordering solutions of a strength of 1 or more in 1,000, it is well to keep such things as solution of hydrarg.-perchlor. at a strength of 1 in 100, or perhaps one in 10, and a scale may be fastened on the back of the bottle. Thus—

FOR 1 IN 1,000 *

8 oz.	requires 384 ml
6 oz. "	288 ml
5 oz. "	240 ml
4 oz. "	192 ml

but if medicines are to be ordered by percentage, it would appear desirable that the metric system should be the rule, or the next Pharmacopœia.

For those who handle foreign prescriptions, it is convenient to keep a scale posted up on the holtte-cupboard. Thus—

3ij. bottle will hold 53 grammes
3iiij. " " 84 "
3iv. " " 120 "
3vj. " " 180 "
3vij. " " 240 "
3x. " " 300 "

These figures should be tested, as they will vary slightly with the brand of bottles used.

There are some useful rules for calculating the contents of barrels and drums in the C. & D. DIARY, 1879. In rectangular cisterns each cubic foot contains 6½ gallons, measuring, in feet, the length × breadth × the height up to the overflow outlet.

* It is a good plan to record on the back of the dispensing-bottle the quantity required for common quantities of many things—e.g., liq. plumbi, mvj.; S.V.R., mvj.; aqua d., 3j.; hyd. subchlor., gr. iij. per 3j. aqua calcis.

Our Town Traveller.

I ALMOST feel that I owe an apology for obtruding myself once more upon the pharmaceutical world, as it gets along well enough without me. But there is a wandering instinct in all of us, which we are supposed to inherit from those exceedingly ancient ancestors who migrated in herds and walked upon all-fours. So I took my way west (an ancestral trait also) with a dozen or more other London citizens in an omnibus; and there the simile ends. Were I to tell about all the druggists' windows I looked into it would be a record of the queerest mixture possible. I could not help admiring the contents of the window in Corbyn's new shop in Holborn—simply a few things to show that it is a pharmacy—but I missed the colocynth, rhubarb, and what not (good specimens of their kind), which stood over the way, and amazed me when I was a boy. Further along was a very nice Christmas window, with smelling salts all over it in globular bottles, in squares and flats, cut and crystallised, the insides filled with tiny balls of sal piunella, glass, or sal volatile, and swimming over with pretty green, blue, red, orange, and violet liquids (looking like supernal pickled onions), that being the fashion just now. Why a fellow gives his best girl smelling-salts for a Christmas present I did not stay to investigate. Second thoughts suggest that she may think the big half-crown bottle a guinea's worth, poor thing! It seemed to me a mockery of the weather-clerk that another window should have such a nice display of lung-protectors. Why, every second man had left his overcoat at home, so mild is our London weather just now. But by the time I came to Mr Martindale's, in New Cavendish Street, my thoughts were concentrated on

PURE PHARMACY,

for here was I in a typical *officinæ* of a pharmacist. I was fortunate in finding Mr. Martindale in, and when I told him of my errand he smilingly acquiesced in my suggestion that he should tell me something which I could tell the trade. The newest thing, and one in which Mr. Martindale is particularly interested, is erythrol tetra-nitrate, referred to in THE CHEMIST AND DRUGGIST, November 30, page 796. It is a medicine of the same class as amyl nitrite and nitro-glycerine, both of which are somewhat evanescent in their action—that is to say, the effects pass off within four hours. There are heart-affections in which a longer-sustained action would be beneficial, and it is just that which erythro-tetra-nitrate seems to supply. At all events, Professor J. B. Bradbury, of Cambridge, says so, and Mr. Martindale is now supplying West-end physicians with the remedy, so that we may hear more of it by-and-by. Mr. Martindale showed me a sample of the nitrate. It occurs in small white crystals, not unlike Howards' mag. sulph. which has slightly effloresced. From the pharmaceutical point of view, the nitrate is somewhat intractable. The dose of it is $\frac{1}{2}$ gr. to 1 gr.; a grain dissolves easily in a drachm of absolute alcohol, but requires nearly 2 drs. of B.P. rectified spirit. In 90-per-cent. spirit it dissolves in the proportion of 1 gr. to 1 dr., but Mr. Martindale called my attention to a slight crystallisation even from that. However, that will, no doubt, be the solution of erythrol nitrate which will be most used. I should think, however, that the $\frac{1}{2}$ gr. tablets made with chocolate basis, in the same way as the nitro-glycerine tablets introduced by Mr. Martindale, will be a more suitable form, for thus the remedy can be carried in one's pocket. From this Mr. Martindale passed on to "Emblics," with which I made my first acquaintance. The emblic is the fruit of a euphorbiaceous plant, *Phyllanthus Emblica*, Linn., which grows throughout tropical India. The fruit has long been used in Ceylon and India as a laxative, and for other purposes. Mr. Martindale imports the whole fruit in large quantities preserved in sugar, for it is imperative that they should not be dried, as then we get an astringent medicine. The virtue of the emblic really lies in the fact that it is used as a dinner-table adjunct. The fruit is exceedingly like a round green gooseberry, and has a little nut inside it. The taste of the fleshy portion is tart and astringent, and after eating one the mouth has a sense of cleanliness as after eating an olive—in fact, the emblic may usefully replace the olive at table. For children Mr. Martin-

dale makes a nice emblic confection, which is tasty and can be used as jam. This is a really agreeable and reliable laxative, which deserves to be much more widely known. Both the confection and whole fruit, in glass jars, can be obtained from Mr. Martindale; and as there is always room for one more laxative, I would recommend provincial pharmacists who have not already done so to introduce this to their medical friends.

PURE SURGERY

next attracted my attention, for in passing down Wigmore Street I stood at Messrs. Allen & Hanburys' surgical dépôt, and was so attracted that I walked in. It is about a year since the firm opened the dépôt, thus relieving their Vere Street pharmacy of this branch of business. The dépôt carries stock of every conceivable surgical requisite, from needle and thread to operating-table, and nearly everything is manufactured at the firm's works at Bethnal Green. The chief object of the dépôt is to supply surgeons and nursing-homes in the district, surgical dressings being included in the supplies. There is a small staff of workmen on the premises to do repairs, and there is also an electric generator for charging accumulators—in fact, every possible contingency appears to have been provided for; and one cannot help thinking of the poor times that *bacilli* must have in these days of *a* and *anti* scepticity. I saw the latest thing in hypodermic syringes. There is nothing organic whatever about them. The glass barrel is ground to a point upon which the needle fits; the piston is a glass rod which moves smoothly in an asbestos collar fixed into the screw metal top of the syringe, and so the four parts can be quickly and effectively sterilised. The syringes are made in sizes from 1 c.c. to 10 c.c., the larger ones for serum injections. They are much liked by medical men, and are no more costly than the old-fashioned hypodermic syringe, if any of them remain. Any pharmacist who does business in surgical instruments should pay this Wigmore Street dépôt a visit when he can. It will give him an idea of the possibilities of development.

SPONGES.

"You are the very man I wanted to see," said Mr. Ernest Cresswell to me when I had navigated my way into his sanctum. Thereupon he proceeded to discourse on the present condition of sponge-fisheries and the appreciated value of sponges. It seems that the Mediterranean fishings are getting exhausted. That is not a new story at all, but the position now is more acute. At the eastern part the divers have to go deeper, and they cannot get the best sponges except when they go to depths of about 60 fathoms. So the mortality amongst them is increasing, and a good proportion of them are turning to other fields of labour. Mr. Cresswell showed me correspondence from agents on the spot, and the tale was the same in all—present prices 20 to 30 per cent. higher, the future black. The Greek fisheries, from which the firm draw most of their Mediterranean supplies, are not so bad. There used to be good fishings round the Syrian coast, but (as I think THE CHEMIST AND DRUGGIST has mentioned before) forests of seaweed have invaded the sponge-beds so the divers could not get at them; and many of the fishers, following the example of their ancestors in the days of Solomon, have sought fortune under British protection, but this time that part of Greater Britain which we call Australia. There is a war in Cuba just now; most people will have noticed that, but they may not be aware that before the war American merchants bought all the Cuban sponges they could get, and as many as possible since. These have, therefore, gone up 20 to 50 per cent., and we may not see any fresh supplies from that quarter for a long time. Then Nassau sponges—

At this point I asked Mr. Cresswell if sponge-culture would not brighten the future. "Not a bit," was the reply, "it has altogether been on the experimental scale. There is no money in it."

This did not seem to give much hope for the future. But black though it may appear the documents which Mr. Cresswell put into my hands at this stage indicate that there is always a remedy if one look for it. This is what Messrs. Cresswell Brothers & Schmitz have done, and in this way. Following up a small exhibit of sponges from British Honduras at the Colonial and Indian Exhibition, Sir Alfred

Malony, the Governor of the colony, began in 1892 to impress upon the Colonial Office the importance of developing sponge-fishing round the coast, but it was May, 1894, before he was able to say in a despatch:—

Our virgin sponge-grounds have afforded experimentally sufficient proof to justify the conclusion that rich crops are locally available, and only await to be reaped. . . . Messrs. Cresswell Brothers see no reason why sponge-fishing should not become relatively as important an industry in the colony of British Honduras as it is in the Island of Cuba and the Bahamas. I fully concur in their view, and would embrace within their estimate even Florida.

The upshot of the matter was that a Bill entitled "An Ordinance for the Development of the Sponge Industry of the Colony" was passed, with the approval of the home Government, the object of it being to give Messrs. Cresswell Brothers & Schmitz the exclusive right to fish the waters of the Caribbean Sea for a term of three years, and that right was ultimately granted to Messrs. Cresswell's Mediterranean manager, Mr. Brown, and two Greek divers, who have been experimenting on the spot since early in 1895, and have carried the experiments to complete success, for they sent home the first consignment of Caribbean sponges to their firm last week, and I was able to inspect some samples of them. But I must quote further from the official documents while I have them the following interesting passage from Sir A. Maloney's despatch of May 2, 1894:—

The sponge-grounds of the colony remain undefined, but may be generally described as the stretches embracing the many islets and reefs that illustrate the natural breakwater to its eastward, of a linear extent of some 200 miles, with a mean breadth of 50.

The geological formation of British Honduras is the same as that of the Bahamas, which lie between 27° 42' and 21° 42' North latitude, and, as it were, in continuity lie the sponging-grounds of this colony between 18° 29' and 15° 54' North latitude.

No divers are employed in either the Bahamas or Florida industry. There, as here, a long pole, with an iron boot or claw, and a water-glass represent the sponger's outfit and illustrate its primitiveness. Operations there are confined, and never go within and never go beyond 20 feet; in the Bahamas and off Florida they are conducted in depths reaching 30 to 35 feet, which will ensure the gathering of a tougher and more valuable class of sponge.

As I am not writing "a paper" I must pass over some minor details and say that the licence granted to Messrs. Cresswell Brothers & Schmitz's representatives stipulated that the fishing should not be done within five fathoms of water (thus preserving local interests), and they should not dredge. At this present date Mr. Brown wants more Greek divers (whom the firm have sent for) and more boats, the plans of which I saw. As for the sponges, they are excellent. I cannot do better than name the varieties:—

Sheepwool.—A honeycomb sponge closely resembling the Florida sponge of the same name. In shape almost globular, of even texture, soft without hard heart or base, and colour in unbleached state good and to the pale side.

Velvet.—Similar to the foregoing so far as shape and general texture are concerned, but has not the long nap of the sheepwool. An excellent sponge for toilet-purposes, also obtainable in exceptional sizes, which can be cut up into sections for stable use. This should be a very durable sponge, as the texture is excellent.

Grass.—A variety of honeycomb, mostly in small globular pieces, good for children's bath-sponges and for domestic purposes generally.

Hardhead Turkey.—This sponge has a real Turkey texture, and occurs in good shapes, growing to cup-shape with age.

Fine Honeycomb.—A sponge which looks like a hybrid between a Turkey sponge and a honeycomb. Quite new to Europe. Occurs in large pieces, and characterised by large "air-holes," to avoid which it is cut into sections for sale.

It is apparent from these notes that in the British Honduras coast we have a new sponge-field which promises well, and the sponges are so like what we have been accustomed to that they will give continuity to a precarious trade. Mr. Cresswell also showed me a string of fine Turkey sponges which he has just received from Oceana, these being merely waifs from a field whose richness is supposed to be vast. So I left him with the idea that another avenue for pessimism is closed up, that Mother Earth is good to

us, and, if we only take the trouble to find out where she has spread her riches, we shall get our reward.

While in the Red Lion Square district, I could not pass the door of Sharp Brothers (Limited), who, as I noted last July, have got into fine new premises at the south-east corner of the square. It is here that they carry on the manufacture of

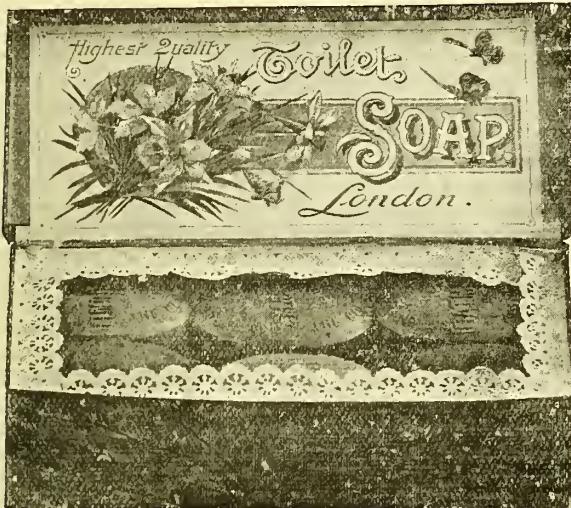
SOAP.

Mr. B. Bernheim, the managing director, took me down to the basement, where the soap is turned out. The arrangements are very complete. The company have placed down ten crutching-pans, each capable of treating 5 cwt. of soap. It is in these pans that the soap is boiled up and all the ingredients incorporated which convert it into toilet-soap. After it comes out of the pans it is cast into huge blocks, which are allowed to stand for weeks or months to mature; then it is cut into bars and cakes, and in the last form is passed into the drying-room, where it is hardened before it is put into the hands of the stampers. The consequence is that the soap is as hard as a milled one. The company also make milled soaps. I may explain that the soap for these is cut up into little pieces, and big trays of these are taken into the drying-room, whence they are not removed until the bits are quite brittle. Then colouring, fatty, and perfume ingredients are added, the whole thoroughly blended in a mill, and the mixture finally passed through a machine on the pill-piping principle; the pipe formed is cut into pieces of suitable size for cakes. Such, in brief, are the chief operations which one may see in Sharp Brothers' soap department. The arrangements appeared to me very complete, and include the production of electric light, so that these modern improvements make an effective contrast to the old associations of the firm. For example, this year the



directors propose to celebrate the centenary of Bentley's Old Brown Windsor Soap, the kind which is supplied to the Queen. Mr. Bernheim told me that he means to make several veritable documents in reference to her Majesty's use of this soap a feature in his advertisements, so I will leave them to speak of that; but I was much interested in a copy of *John Bull*, for June 24, 1827, containing Mr. W. G. Bentley's advertisement of the soap. Just above that advertisement is one by Forster, chemist, &c., Bedford Street, of his "Improved Crystals of Lemon and Kali," which, I suppose, is one of the earliest announcements of that "most salutary and refreshing drink." Bentley's Brown Windsor soap is put up in several styles; the one illustrated above is the shape supplied to the Queen. It is a fine soap, both in composition and flavour, and is not so brown as to soil towels—a common fault of O B W. soap. The company are introducing a new line of toilet-soap packed in dozen boxes (see p. 115). The cakes are oval and with floral surface, four to the pound. Basis, colour, and perfume are all right, and the retailer can make his own assortments from the following:—Brown Windsor, honey, glycerine and almond, curd, oatmeal, Castile white and mottled, rose, and elder-flower. The dozen box may be retailed at 2s., but there should be little difficulty in getting 2s. 4d. or 2s. 6d. for it, as it is as good as some cut-rate soaps sold at these prices. Mr. Bernheim informed me that he is perfecting a "Pan-salia" series; already he has the soap—a nice one it is—and perfume, sachet, face-powder, &c., are on the way.

A few minutes spent in the showroom sufficed to demonstrate with what taste the company put up all their per-



fumes and soaps; and now that they have completely modern surroundings, and are getting to the end of their first year's work, we may anticipate still further developments.

It has been said of Englishmen that they are the most clubbable race in the world, and it is partly owing to that trait that the idea of a

CHEMISTS' CLUB

has caught on. Already there are the Pharmacy Club and the Drug Club in London, but these are exclusive affairs, whose chief function is to dine or otherwise to make merry, although I have heard that the second-mentioned club sometimes calls up the spirit of my Mincing Lane colleague, and castigates it for the iniquity of bottom prices. We owe the idea of a chemists' club to Mr. Horace Davenport, who threw out the suggestion at the last "Camwal" meeting. Mr. George Barclay and his brother have since joined him, and they have secured a magnificent floor at 2 Farringdon Avenue, which I found last Friday morning to be in the possession of painters. The avenue is half-a-minute's walk from Ludgate Circus. When I got West I called on Mr. Davenport, and was fortunate in finding him presiding over a meeting of the Formation Committee; so I sat down and smoked a cigar with them, shooting in questions as the ash increased, and this is the result of that interview.

The object of the Club is to have a place in the City which town and country chemists may use as a meeting-place for business purposes. Any registered chemist and druggist of Great Britain can be a member by simply paying the annual subscription—5s. for those in London and 2s. 6d. for provincial chemists. The same applies to pharmaceutical chemists and registered druggists of Ireland, and colonial chemists will also be eligible for election at the half-crown rate. Others connected with the trade will go through the formality of proposal and election by the committee. The club will not at the outset be a house club—i.e., no one will be able to get a bed there or a dinner—but there will be a steward in attendance, who will supply such light refreshments as chemists are partial to, and which may be necessary for assisting business. The club floor will be divided into two large apartments, one to be used as a reading and recreation room, the other to be devoted to exhibition purposes—the latter, as far as I can gather, on similar lines to what the proprietors of THE CHEMIST AND DRUGGIST had a floor of Colonial Buildings set apart for twenty years ago; but, in the present case, exhibiting firms will pay for the space which they will occupy. They may change their exhibits as often as they like, but they must allow them to speak for themselves, and do no touting. Touting will be totally barred. A retailer may ask a wholesale house to send a man with samples to him at the club, but in all cases the member of the club must take the initiative. It is conceivable that a chemist from the country would find the club of

great use. He could have his letters addressed there, call to read them and write replies, or speak to any house through the telephone, and there will be in the club conveniences for quiet interviews, and so on. Even a town chemist often wants a place where he can pass a quiet half-hour before returning to his pharmacy, and he will have this privilege at 2 Farringdon Avenue for a penny a week. The liability of the members will be limited to the annual subscriptions, for the promoters undertake the responsibility of making both ends meet, and they hope that wholesale and sundries houses connected with the trade will support them by taking exhibiting-space, as the scheme is intended to make the transaction of business easier for the whole trade, and not for any firm exclusively. Already a goodly number of retail chemists have given in their names, and, as soon as the club premises are ready for occupation and the members can be called together, a sub-committee will be appointed for the purpose of drawing up rules and regulations for the management of the club. The committee of promoters will retain the power of veto—that is to say, they will be a sort of House of Lords. As yet, however, the scheme of management is in an embryonic state; but there is the club-house, and those who want to make use of it should send in their names to Mr. Horace Davenport, Great Russell Street, W.C.

Business Changes.

MR. W. H. AUSTIN has opened the College Pharmacy in Charlotte Street, Devonport.

MR. DAWSON, Dearhanger Street, Edinburgh, is about to open a chemist's shop in Fountainbridge, Edinburgh.

MESSRS. GLASS & INNES, Clerk Street, Edinburgh, contemplate opening another shop in Morningside Road, Edinburgh.

MESSRS. POINGDESTRE & TRUMAN, chemists and druggists, having dissolved partnership, the business in Old Kent Road, London, S.E., will be continued by Mr. Frank Wilton Truman, whilst Mr. Harry Vernon Truman will take over the business at Newington Butts.

MR. GEO. W. HARRISON, the proprietor of Harrison's reliable rat poison, has sold his retail chemist's business at Ashwell, Herts, to Mr. Bond Smith, of Potton, and is removing his manufacturing business to 22 Cross Street, Reading, where he has taken the retail business lately carried on by Mr. Biddle.

Deaths.

APPLIGATE.—On January 1, Mr. Edwin Applegate, pharmaceutical chemist, Islington. Aged 65.

BAINES.—On December 24, Mr. John Baines, chemist and druggist, late of Corsham. Aged 73.

COCKSEEDGE.—On Friday, January 3, Mr. H. B. Cockseedge, pharmaceutical chemist, Sandown, Isle of Wight. Aged 80.

GARBUTT.—On January 11, Mr. James Garbutt, chemist and druggist, Wellingborough. Aged 80.

LOWE.—On January 7, Mr. John Lowe, chemist and druggist, Woolwich. Aged 80.

NELSON.—The death has occurred, under sad circumstances, of Mr. Horatio Nelson, analytical chemist, Moss Bay, Workington. Deceased's body was found in the River Derwent. He had been suffering from depression.

WEBB.—On January 20, at Cookham Dene, Chislehurst Emily Fuller, for twenty years the dearly-loved wife of Edward Alfred Webb, and eldest daughter of the late George Fuller Howes. Aged 42.

Post-Prandial Pharmacists.

I.—THE NERVOUS SPEAKER.

HE is that thin-faced little man over there without an appetite. In the lulls of conversation you can hear him muttering to himself. He is once more running through the speech he is going to forget as soon as he rises to his feet.

His life has been a somewhat anxious one since, about a week ago, he received a courteous little note from the Chairman asking him to propose a certain toast. A little glow of satisfaction spread over him just after breaking open the envelope. He purred softly to himself over the matutinal coffee, and prefixed the reading aloud of the letter to his wife with a careless, "They want me to propose the toast of so-and-so at the annual dinner." But his wife knew him, and watched for the change that would come over his face when the mental picture of the banqueting-hall with its rows of attentive faces rose before him. She had not long to wait.

There are pharmacists who can speak better than they can write, and pharmacists who can write better than they can speak. Of course, there are some who can do neither well, and many who think they can do both well. Our nervous friend belongs to the second of our classes. His laurels were won in the library and the laboratory, and in his own particular groove he has few peers. It happens that he has a sensitive, introspective nature, and lacks assurance—a quality and a defect handicapping him as a speechmaker. When he cannot beg off from making a speech he finds it necessary to sit down and deliberately compose one, learn it off by heart, and repeat it to his wife and his looking-glass.



His wife praises his phrases and his looking-glass praises his gestures. Nothing seems to stand between him and success. On the morning of his day of trial he rises with a light heart. From the morning's view-point the evening will be one of pleasurable distinction. As morning wanes and evening approaches the pleasure grows less attractive. At the dressing-hour the discovery that his collar is not large enough to go comfortably round his shirt-neck, and may therefore develop a tendency to slip upward, disturbs his serenity. With much pondering on the evil possibilities of that collar he loses confidence in his appearance, his speech and himself.

In the pleasure of meeting old friends and making the acquaintance of new ones he forgets his trouble until someone tells him that a clever speech is anticipated from him. This worries him, and he becomes preoccupied and moody. The impending trouble grows upon him, crushes his spirit, steals his appetite. Quip, crank, and jest fly around him. He listens as in a dream—at the best responds with a haggard hilarity. Obsequious waiters wonder why he adds mustard to devilled whitebait, why he tries to pour hock into a full champagne-glass, why he meditatively eats parsley and leaves his entree. Course by course his courage ebbs, and despair comes with the sweets to annihilate memory. He

discovers this, and hastens to retrieve himself by jotting down notes on his cuffs. He drops his pencil, and dives for it simultaneously with a fat, bald-headed waiter. After a collision of heads he emerges with swollen temple-veins and profuse apologies. The waiter smiles with sickly charity, and goes off to discuss the clumsiness of diners with his fellow at the kitchen screen.

When other men light cigars and interchange opinions he pays no heed, but goes on making mistakes in spelling on the back of his menu-card. When other speeches are in progress he listens with pretended attention, the while striving to collect his normal calm. Just as he becomes fairly successful the Chairman shouts—positively shouts—his name, and a thundering handclap strikes his ears. He springs to his feet, scattering a glass of claret to the winds of heaven. In diving forward to save it—the claret, not heaven—his collar, long chafing to escape the outward pressure of his shirt-neck, springs upward at one side and takes up an uncomfortable position under his jaw. He replaces it with wine-stained fingers, and blunders into his speech.

His elaborate phrases of the morning have gone to the outermost limbo, his undecipherable notes of the evening are on the other side of his menu-card. He makes a shift to patch together a few commonplaces into half-a-dozen apologetic sentences, and is glad to regain his seat on any terms, even if those terms include the necessity of rising again to correct his failure to propose the toast against his name.

II.—THE BOMBASTIC SPEAKER.

There is no pinafore diffidence about our next type. He is not self-conscious, or reserved, or shy, and he does not blush a rosy-red when a rude man looks at him. When he has to make an after-dinner speech he does not get excited at the mention of his name by the toastmaster, or jump wildly to his feet, or indulge in any of the other childish extravagances of more sensitive men. He leans back luxuriously in his chair, and with his eyes fixed on the ceiling and a pleased expression playing round his mouth, absorbs the dainty buttering he receives at the hands of the Chairman. When the round of hand-clapping following his introduction has subsided, he takes a deliberate mouthful of claret, swallows it slowly, and meditates on its flavour. Then with great deliberation he rises, puffs his cigar into fresh life, and finally, looking calmly and collectedly round the room, speaks his "Mr. Chairman and Gentlemen."

In the speech that follows he extends an amiable toleration to any members of the medical profession who may be present, and speaks in words of kindly patronage to the men of his own cloth around him. You see, he knows a great deal, and knows that he knows it, and that is as as helpful in after-dinner oratory as it is in the outside world. Eloquent ignorance has a much better chance than inarticulate knowledge. The world judges so much by appearances, and has so little critical power, that it nearly always takes a man at his own valuation. He has but to lay down the law with sufficient confidence and belief in himself to cause people to believe in him, and to understand what he is talking about when he does not know himself. He is so convincing because he is so self-confident. You cannot help crediting him with some of the wisdom that he looks. Even if his speech happens to be really impromptu, and he pauses for words,



you cannot help thinking that it is because he is troubled with too many instead of too few ideas.

If his speech has been carefully prepared and committed to memory, he does not miss any of the points for lack of deliberateness in delivery. His words fall slowly and pompously. If he is in a generous mood he will unfold his pet scheme for the regeneration of pharmacy. He is allowed to do this because after-dinner etiquette prohibits the braining of a bore with an empty champagne-bottle. Everybody has a pet scheme for the regeneration of pharmacy, and most people have more than one, generally antagonistic. But all the pet schemes are petty beside that of the bombastic man. He holds the original patent for the salvation of the trade. He stole it in the days of his youth from a commercial traveller, and he has been posing as a statesman ever since. Having once drifted into omniscience he finds it is not easy to drift out again, and his after-dinner speaking is as the noisy singing of a kettle with its lid occasionally lifted by a spurt of egoism.

III.—THE PURPOSELESS SPEAKER.

When the Purposeless Pharmacist stands up to address his audience the weight of his head tilts his body forward, and the weight of his arm necessitates the resting of his hand on the back of his chair. He is not afflicted with nervousness;

his fidgeting with his watch-chain should not be mistaken for this: it comes from a half-formed determination to ascertain the time. He has a lot to say, but no idea of the form in which to say it.

He commences in a rambling sort of way to teach pharmacy to pharmacists, but, suddenly appreciating the enormity of his offence, desists apologetically. Then he gives his attention to the Society. The Society is a broad-backed enough body with many attackable points, and it offers peculiar critical advantages to the purposeless man with a grievance.

He is not slow to avail himself of his chances, and attacks it with a light heart. There is something wrong, he thinks, with the trade and the Council. You gather from a dozen indifferent, indefinite sentences that he believes that the trade lacks combination and the Council power to make it combine. He seems to be leading up to a plea for the grant to the Council of the power of enforced registration. Just as he opens his mouth to crown your anticipation, however, he suddenly draws back into his shell. All unaware he had nearly committed the imprudence of expressing a decided opinion. As he cannot accept such a responsibility his sentence tails off into some such limp generalisation as the hope that the Council will soon make a move and do something for the trade. He is not quite decided as to what that move ought to be, for, after all, that is the Council's business, not his. His duty appears clear to him to consist in placing upon record a mild protest against the Council's painful dilatoriness in providing an easy income for everybody.

His ideas on pharmaceutical politics are anaemic, and his critical progress is checked by his desire not to weaken the leading of the leaders by undermining their well-meant efforts. He cannot make up his mind whether the pharmaceutical world would be better if he loyally backed up the Council or if he sternly criticised it. He has the trade's best interests so much at heart, and is so anxious to follow the wiser course, that he hesitates between both, progressing

along neither. The source of much of his trouble is his ready response to outside influence and his easy adaptability to local colour.

This inability to weigh judicially and arrive at definite conclusions causes the most distressing mental and verbal confusion. He conceals his meaning so adroitly that you wonder if this man of science has turned mystic and is obscuring his inner thought under some elaborate system of symbolism. And so he shambles on through a maze of diffuse sentences until at last, some twenty minutes after vulgar diners have given up whispering the hope that he would go outside and spill himself over a precipice, he sits down—on the place where his chair was.

Medical Gleanings.

NAPOLEONIC MEDICINES.

MR. C. B. WILLIAMS, of Philadelphia, communicates to the *Medical and Surgical Reporter* two favourite prescriptions of Napoleon I. The first is

Napoleon's pectoral pill :—

Pulv. ipecac.	..	..	..	..	gr. xxx.
Pulv. scilla	..	..	..	..	gr. xl.
Pulv. ammoniae	..	..	..	..	gr. xl.

M. Ft. et div. in pil. No. xxxiv.

Sig.: Dose, 2 pills night and morning.

Napoleon used this for difficulty of breathing, bronchitis, and various affections of the organs of respiration. The following was *Napoleon's remedy for immediate relief of hoarseness* :—

Liquor. ammoniae fortioris	..	..	..	..	ml. x.
Syrupi eryseimi	..	..	..	..	3iiss.
Infusionis tiliae florum	..	..	..	..	3iiss.

M.

Sig.: To be taken at one dose.

As syrup. eryseimi and the infusion of linden-flowers would be rather difficult to procure at the present day, Mr. Williams suggests the following as a good substitute :—

Liquor. ammoniae fortioris	..	..	..	..	ml. x.
Syrup. acacie	..	..	..	..	3iiss.
Aqua aurantii flor.	..	..	..	..	3iiss.

M.

Sig.: To be taken at one dose.

URETHRAL INJECTIONS.

ACCORDING to a King's College Hospital surgeon one of the best injections for gonorrhœa is :—

Sulphate of zinc	..	..	..	..	gr. iiij.
Tincture of catechu	..	..	..	..	ml. x.
Tincture of opium	..	..	..	..	ml. v.
Glycerine	..	..	..	..	ml. xv.
Water to	..	..	..	..	3j.

In using injections, it is essential that the urethra is first washed out and cleansed from any discharge lying in it. To accomplish this, the natural act of micturition suffices—i.e., the injection should always be employed after voiding urine. The nozzle of the syringe is then inserted into the urethra, and the lips of the meatus closed over it by the fingers; about $\frac{1}{2}$ oz or more of the fluid is introduced into the urethra, and should be retained there for about one minute, being subsequently allowed to flow away.

Vatier recommends a combination of antipyrin and corrosive sublimate as an injection in gonorrhœa :—

Perchloride of mercury	..	..	..	..	gr. j.
Antipyri	..	..	..	..	9v.
Distilled water	..	..	..	..	3iij.

Dissolve.

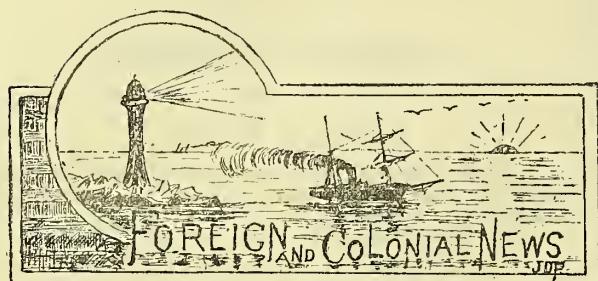
The injection should be used four times a day, and retained as long as possible. The addition of antipyrin prevents smarting.



The Art of Pharmacists.

SKETCHES SUBMITTED BY SUBSCRIBERS OF "THE CHEMIST AND DRUGGIST" AND THEIR EMPLOYÉS FOR "HEADINGS."

The subjoined reproductions are a selection from the postcards sent to us in competition during December, 1895.
Further selections from the postcards will be printed in subsequent issues.



By J. D. Petrie, Blairgowrie, N.B.



By Falconer, Barrow-in-Furness.

Editorial Notes.



By Helen Pettinger, Hampstead.



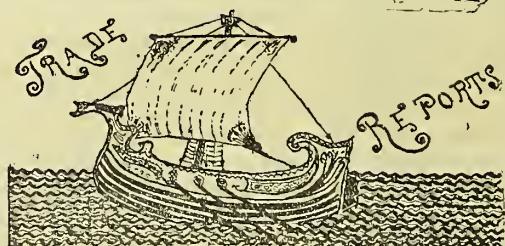
By C. Falconer, Barrow-in-Furness.



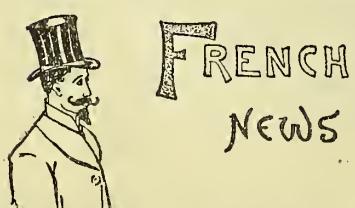
By Stanley Lester, St Lukes, Cork



By Jas. A. Mitchell, Inverness.



By Caliban.



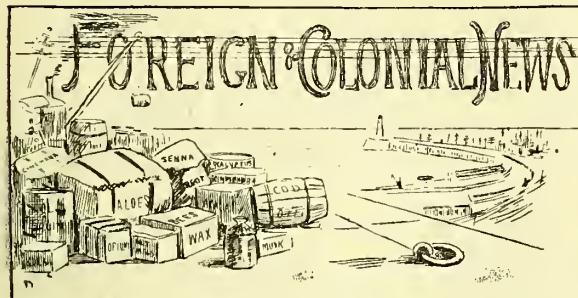
By C. W. Dowswell, High Wycombe.



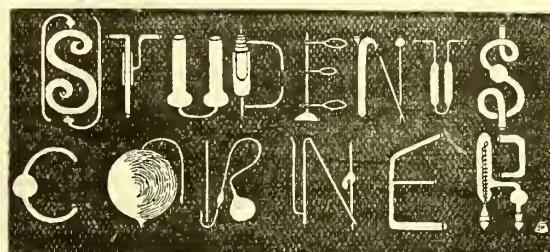
By C. Falconer, Barrow-in-Furness.



By A. M. Nicolson, Newton Stewart.



By Fred. Reynolds, Ilkley.



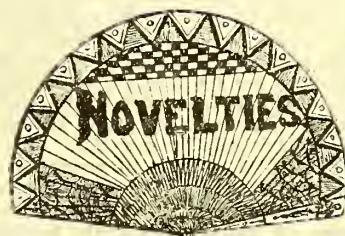
By J. Vernon Mitchell, London.



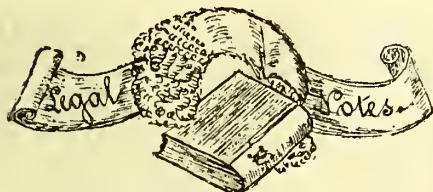
By A. M. Nicolson, Newton Stewart.



By C. Bell, Nunhead.



By Bamborough M. Miller, Blaydon-on-Tyne.



By Mrs. Denning, Sligo.



By Bamborough M. Miller, Blaydon-on-Tyne.



By C. Falconer, Barrow-in-Furness.



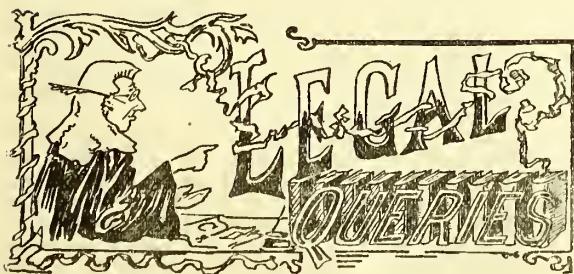
By Bamborough M. Miller, Blaydon-on-Tyne.



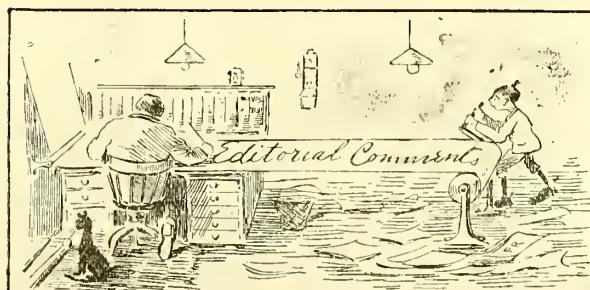
By C. W. Dowswell, High Wycombe.



By Bamborough M. Miller, Blaydon-on-Tyne.



By L. Angel, Belsize Park.



By Fred. Reynolds, Ilkley.

The Toothbrush.

By JOHN WESSLER, Director of the Stockholm Dental Clinic.

"WHAT kind of toothbrush ought I to use?" is the question often addressed by a patient to his dentist, who, quite as often, finds it difficult to answer, for the simple reason that out of the great number of more or less peculiarly-shaped toothbrushes in the market hardly one is suitable for practical use and worth recommending. The dentist, therefore, only too often answers the question by vaguely suggesting the purchase of "a not-too-close and moderately-hard brush." There is no lack of models in toothbrushes, but the want of a rational brush is still felt. It is, indeed, difficult to explain why this matter has been so much neglected by the profession. The general public suffers accordingly. It can never be too strongly pointed out to people that the toothbrush is the principal means of cleaning the teeth, and that tooth-powder, liquid dentifrices, &c., play, in comparison, a secondary part. When using dentifrices one must endeavour to remove, mechanically, with the toothbrush all kinds of deposits, which are the nurseries for the propagation of bacteria and the development of lactic fermentation, and to do this it is not sufficient to depend upon the rinsing of the mouth with an antiseptic fluid, be it ever so powerful. It is practically impossible for the fluid of itself to penetrate and sterilise the thick and tough deposit upon the teeth, and as soon as the antiseptic influence of the rinsing vanishes the micro-organisms grow on the deposits again far more readily, and with greater vigour, than they do on a well-brushed enamel.

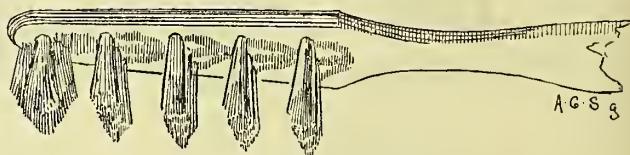
The use of a rational toothbrush with nothing but water is, indeed, in many cases preferable to the use of an imperfect brush in conjunction with some tooth-powder or liquid. The following are what I regard as the essentials of a rational toothbrush, viz :—

1. A shape well adapted for the mouth and the jaws.
2. A suitable shape for cleaning the interstices between the teeth.
3. The brush must be easy to keep clean.

When considering the first essential from the broad point of view, we at once encounter a serious difficulty, inasmuch as, the jaw being convex on the exterior and concave on the interior side, it appears impossible that the whole surface of one and the same brush can be adapted to both forms. The most reasonable solution of the problem would undoubtedly be found in the use of two brushes,* one for the exterior, and another for the interior surface of the teeth. This was the thought that presented itself to Pierrepont when constructing the toothbrush which he called the

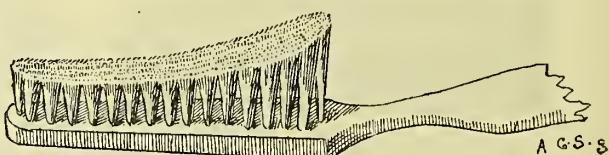
roughly saw-toothed at the point than at the handle end, to adapt the brush to the interstices between the molars (the coarser sawing) and the front teeth (the finer sawing) respectively. The brushes have two or three rows of bristles, and are, consequently, easy to keep clean. Although some remarks of minor importance no doubt could be made against Pierrepont's "Thorough Cleansing" toothbrush—for instance, the length of the bristles on the convex brush—it might, nevertheless, be considered as representing, theoretically, the ideal of a toothbrush. But most people will probably admit that, from a practical point of view, this model neither is, nor can in the near future become, of very great importance because it is too complicated. The education of the public at large in matters concerning the hygiene of the mouth is not such as to make it practicable to insist upon the use of two toothbrushes. Indeed, it is often difficult enough to induce certain people to use one brush every day. The pecuniary side of the question carries also no inconsiderable weight with many persons. The principal point is that too much ought not to be expected from the public, or one might risk losing everything. When the time arrives that the public will bestow more attention and time on the care of the teeth, it may, perhaps, be possible to insist upon the use of two toothbrushes. Meanwhile, I will try to show in what follows how it is possible with a single toothbrush to dispense almost entirely with the convex brush intended for the interior sides of the teeth.

The "Rational" toothbrush, designed by Mr. A. Bramsen, is also a model founded on scientific principles. The objec-

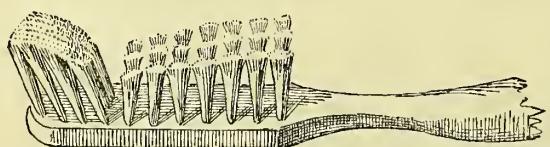


tion to this model is that it is not adapted to the shape of the mouth and the jaws, all the bunches of bristles being of the same length, without projections where the brush itself joins the handle. It also appears as if the effect of the brushing would be more imperfect on than between the teeth, and this results, in the author's opinion, from the spaces between each row of bristles being too large. But this model deserves much praise in several other respects, and particularly with regard to the construction of the point of the brush, where, as seen from the illustration, several small bunches of bristles are fixed together into one large bunch. The part thus formed is specially intended for the interior sides of and the interstices of the teeth.

The model reproduced below (also stated to be by Pierrepont) is a comparatively common and fairly good one.



"Thorough Cleansing," and which consists of a couple of brushes, the one with a convex surface being intended for the interior sides of the teeth, and the other, being intended for the exterior, has a concave surface.



As shown by the above illustration† each brush is more

* As to the purely technical side of the question, one might imagine the possibility of making a double toothbrush—i.e., with one brush at each end of the same handle.

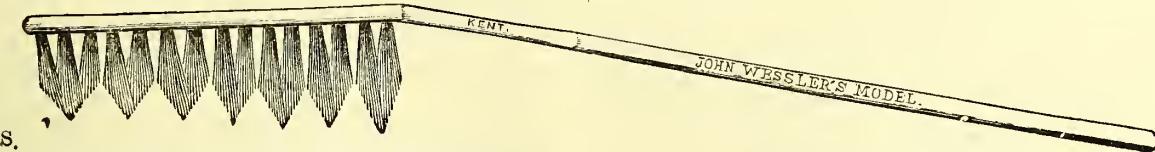
† The illustration is somewhat diagrammatic, the brushes not being actually so even.

This model fulfils entirely the condition mentioned as the first essential, but not the two other conditions. The brush is cut even, and enters, therefore, only very imperfectly into the interstices of the teeth. Besides, the bristles are too closely set, and consequently the brush is difficult to keep clean after having been used for some time. It has, notwithstanding these defects, been used many years, and is recommended by several dentists.

It results from the foregoing that no one of the models described wholly presents the essentials of a rational and practical toothbrush. The author, in order to meet these claims, has devised a special model, which is made by Messrs. G. B. Kent & Sons, London, the principal brush-manufacturing firm in the world, and he hopes that this model, called by the manufacturers "John Wessler's model," may secure the attention and favour of the dental profession. The model is constructed with three rows of bristles, and is made in

two sizes, the smaller one of which is intended for children up to about 12 years of age. The degrees of hardness are hard (H), medium (M.), medium soft (M.S.), and soft (S.),

the handle downwards, in a glass or a brush-cup, it being of importance not to keep it in a closed place, such as a china tray, &c., as is often done.



S.

and M.S. being adapted for children, and M. and H. for grown-up people.

On more closely examining this model its most striking points will be found to be the angle (167°) on the neck of the brush, and the decreasing length of the bristles towards the points. The extreme points of the bristles are on the same level, the consequence being that the brush surface can neither be called concave nor convex. Everyone will understand without further explanation that all this is done for the purpose of making the back molars more accessible to the brush without its being necessary for the corner of the mouth to be stretched to any appreciable extent. The first essential of a rational toothbrush is thus fulfilled.

The second essential, concerning the facilities for keeping the interstices of the teeth clean, is fulfilled by the brush-surface being deeply serrated. The bunches of bristle are fixed in a slightly converging position towards each other, in order that each "saw-tooth," consisting of three pairs of bunches, may more forcibly than otherwise is the case be pressed in between the teeth (see the illustration). On first considering the effect which this brush should have as much upon the buccal and labial sides of the teeth and their interstices as on the masticating surfaces, I think that I can safely declare that it excels all other toothbrushes. Then comes the question as to the inner sides of the teeth and the interstices between. I have already mentioned that Pierrepont's "Tborough Cleansing" (inside) is specially constructed for this purpose, and the shape of it makes it just possible, when using the brush, to apply the whole surface—a procedure which is out of question when the brush is straight. One must therefore use only the fore part in brushing the inner sides of the teeth. I believe, however, that even those who use the Pierrepont toothbrush are much inclined to use only the point, because it is easier to use it so. The author has paid proper attention to the necessity for cleaning the interior surfaces and the adjoining interstices, and by giving his brush-point the shape of a cone consisting of seven bunches of bristle the objection referred to is removed. It seems superfluous to give any detailed explanation as to the use of this cone, and its effect when applied on the interior sides of the teeth and on the masticating surfaces, all of which can be more profitably ascertained by practically testing the brush. There is, indeed, only a slight difference, if any, as regards the effect between Pierrepont's "Tborough Cleansing" (inside) and the author's model, and it is unnecessary to point out the great practical and economical advantage of the latter, inasmuch as it can be used with equal success on the interior as on the exterior sides of the teeth.

It is obvious that the new model must be very easy to keep clean, because it is provided with only three rows of bristle, and these rows are placed in one line, and not zigzag as is usually the case. I can confidently recommend it to the profession and the public.

Finally, I beg to add a few words as to how a toothbrush ought to be taken care of. Before using the brush for the first time it should be put into water for some hours in order to let the bristles swell till they properly fill each hole. This obviates the bunches of bristle becoming loose when put into wear. The bristles obtain their proper elasticity only after the brush has been in use for some time—say, a fortnight or a month. If, therefore, the brush seems rather hard in the beginning, it should be placed in water for a little while each time before it is used. If the brush is not quite even, the protruding bristles should be cut off, and not torn out. After use the brush should, on each occasion, be carefully washed and the water shaken out, besides being well rubbed on a towel, and then hung up, or placed, with

British Patents.

The subjoined are the briefest possible abstracts of specifications. Should anyone wish to have fuller particulars, the best plan is to get a copy of the specification desired, for which purpose they may obtain from any post office, for 8d., a patents-specification postcard, the despatch of which, duly filled in, will bring the copy by return post.

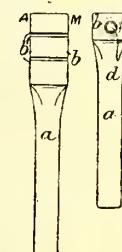
PATENTS have recently been granted for the following articles:—

Baking powder (No. 14,179, 1894).—Mr. G. Weddell, 20 West Grainger Street, Newcastle, adds phosphates to the usual ingredients—*e.g.*, calcium, magnesium, sodium, and potassium phosphates are added to a mixture of ground rice, bicarbonate of soda, and tartaric acid. He also claims for the addition of phosphates of iron and manganese, and calcium fluoride.

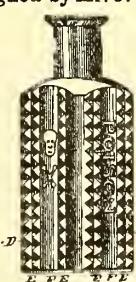
Drying-ointment (No. 13,446, 1894).—Mr. O. Troplowitz, Hamburg-Eimsbuttel, prepares a siccative ointment by emulsifying vegetable or animal fats, or mineral oils with neutral or alkaline solution of casein. This solution is made by diluting skinned milk with water, adding acetic acid, washing the precipitated casein with water, and removing fat with benzine. The casein is then dissolved in a mixture of ammonia, glycerine, and distilled water. Borax may be used to dissolve the casein.

Eucalyptol.—The patent (No. 14,138, 1894) secured by Mr. L. R. Scammell, Adelaide, states that eucalyptol is extracted from eucalyptus oil by adding a solution of phosphoric acid, *s.g.* 1.785. The precipitate obtained is separated and decomposed by hot water, for the liberation of the eucalyptol.

Packing and Sorting Opium.—For this purpose Mr. A. Castenholz, Karlsruhe, proposes in his patent (No. 14,369, 1894) to pack the drug in metallic tubes *a*, which are crossed at *b* and folded, and the flaps *b* punched and secured by rivets or eyelets *d*. The tubes are marked by stamping round the rivet at *c*, and by private marks as at *A*, *M* under the fold. The tubes are packed vertically in a partitioned box which is also marked, and enclosed in a marked wrapper secured by a metallic clip. These boxes are finally enclosed in another box, which is corded and sealed and marked with a description of the opium. The opium is extracted by pricking a hole in the tube and pressing it.



Poison-bottle.—The bottle figured is designed by Mr. J. H. Valentine, Chatham, New Jersey (Patent No. 14,125, 1894). The bottle is square or rectangular, and two adjacent sides *D* are formed with projections *E*, preferably arranged in rows, as shown, with a groove *F* between. The other two sides are left flat to receive the label.



Soluble Double Phosphates (No. 13,199, 1894).—Mr. C. Raape, Berlin, makes soluble double phosphates of alkalies and such metals as bismuth by melting together the required amounts of alkali, phosphoric acid, and metallic oxide in molecular proportions. Two modifications of the process are given.

Some Druggists' Specialities.

LOOKING over an old recipe-book which we received some time ago from a druggist of the old school, now retired, we were appalled at the frequency with which aperient mixtures, pills, and powders, remedies for diarrhoea and cholera, and cures for venereal complaints occurred amongst the counter-practice recipes. In those days when the Queen was still young and nursed babies there seemed to be few remedies to jingle with, but they played a very pretty tune with them, and made up in variety what they lacked in efficacy. When one has only opium, squill, and ipecac. to work upon for an asthmatic cough, a nasty touch of bronchitis, or the after-effects of "an influenza cold," it requires some skill to get variety and to please everybody. In those days, however, our *confrères* managed. Comparatively few of their prescriptions are practicable for modern trade. For example, to give a weakly, anaemic child a powder of calumba bark and rhubarb may have been all very well fifty years ago, but the modern youngster will not look at it, although he will take "Parrish" with avidity, and even a spoonful of cod-liver oil before it with a little pressing. We have kept these facts in mind when selecting the following group of useful recipes from the book, and give only those which we think can be turned to practical account in everyday pharmacy. The whole of the medicines have been proved by experience to be useful:—

Ringworm-lotion.

Acid. sulph. aromat.,
Spt. aeth. nit.,
Oreosoti, partes equals.

M.

Apply once a day with a feather until well.

Antibilious and Liver Pills.

Pulv. antim. tart. gr. xlvij.
Pil. hydrarg. 3j. 5j. gr. xxxvj.
Pulv. camboigae 3j. 5j. gr. xxxvj.
Pulv. capsici 3ij. 9j. gr. xxiv.
M. Ft. mass. Divide in 4-gr. pills.

"One at bedtime."

Tasteless Worm-powder.

Santonin. 3j.
Pulv. sacch. alb. 3ij.

M.

Doses: 2 to 5 years, 6 gr.; 5 to 10 years, 9 gr.

Cooling powder for Children.

Hydrg. subchlor. 5ij.
Antim. tart. gr. iiss.
Pulv. amyli 5iv.

M.

Doses: 6 months to 1 year, gr. ij.; 1 to 2 years, gr. iiij.; 2 years and upwards, gr. iv.

Toothache-pills.

Pulv. rhei gr. xij.
Quininae sulph. gr. xxiv.
Camphor. gr. xij.
Ext. hyoscyam. gr. xxxvj.

M. Ft. pil. xxiv.

One every four hours until relieved.

Essence of Chamomiles and Ginger for Indigestion.

Ol. anthemid. 5ss.
Spt. vin. rect. 5ss.

Solve et adde—

Tr. zingib. fort. 3ss.
Tr. lavand. co. 3ss.

M.

Dose: A teaspoonful in a wineglassful of water when required.

Artificial Goats' Milk.

Tie a piece of mutton suet in a muslin bag, and boil it gently for ten minutes in new milk.

Draughts to Prevent Nightmare.

Ammon. carbon.	..	..	..	..	gr. x.
Aq. cinnam.	..	..	..	..	3ss.
Aq. camph.	..	..	..	..	3ss.
Tr. capsici	..	..	..	..	3ss.
Syrup. crociad	..	..	..	..	3ij.

M.

"To be taken at bedtime."

Balsam of Honey.

Balsam. tolu.	..	..	..	..	Ibij.
Mel. ang.	..	..	..	..	Ibij.
Ol. anisi	..	..	..	..	5iv.
Sp. vin. rect.	..	..	..	..	cong. j.
Rass. sant. rub.	..	..	..	..	q.s. to colour

M.

Dose: A teaspoonful three or four times a day, or when the cough is troublesome.

Drops for Deafness.

Ol. amygd. dul.	..	..	..	..	3j.
Ol. succin. rect.	..	..	..	..	viij.
Spt. camphor.	..	..	..	..	5ss.
Tinct. castor.	..	..	..	..	5j.

M.

Four or six drops warmed to be dropped into the ear affected night and morning.

Liniment,

which when warmed and rubbed over the surface of the abdomen very quickly allays the pains of flatulent colic.

Lin. saponis comp.	..	..	..	..	3iiss.
Lin. camphorae co.	..	..	..	..	3iiss.
Ol. terebinth. rect.	..	..	..	..	3ij.
Sapo. hispan.	..	..	..	..	3ij.
Ol. cajuput.	..	..	..	..	5j.
Ol. limon.	..	..	..	..	3j.

Mix, and make a liniment, to be rubbed assiduously or applied warm over the surface of the abdomen.

Draught for Hysteria.

Spt. lavand. comp.	..	..	..	..	5iiss.
Spt. ammon. arom.	..	..	..	..	5iiss.
Spt. aetheris	..	..	..	..	5iiss.
Aq. camph.	..	..	..	..	3iiss.

M.

Capt. 5j. ter in die.

Antacid Draught.

Magnes. calc.	..	..	..	..	5ss.
Aq. menth. pip.	..	..	..	..	3iiss.
Tr. aurant.	..	..	..	..	5j.

M. Ft. haust.

Suitable for heartburn and other cases of acidity in the stomach.

Cough linetus.

Confection of hops	..	..	..	..	3ij.
Powdered tragacanth	..	..	..	..	5j.
Syrup of poppies	..	..	..	..	5vj.
Vinegar of squills	..	..	..	..	viij.
Boiling water	..	..	..	..	3vj.

Mix.

Dose: From 1 to 3 teaspoonfuls occasionally.

Rhatany and Charcoal Dentifrice.

Pulv. kramericæ	..	..	..	..	3vij.
Pulv. carbon. ligni	..	..	..	..	3xxiv.
Ol. cinnam.	..	..	..	..	3lxxv.
Otto roseæ	..	..	..	..	3lxxv.

M. Ft. dentifrice. To be passed through a fine drum sieve several times.

Cough mixture for Adults.

Succ. solazzi	..	..	..	..	5ij.
Gum. acaciaæ	..	..	..	..	5ij.
Aq. bullient.	..	..	..	..	3iv.

Strain and add—

Vini ipecac.	..	..	..	..	5ij.
Tinct. camph. comp.	..	..	..	..	5ij.

M.

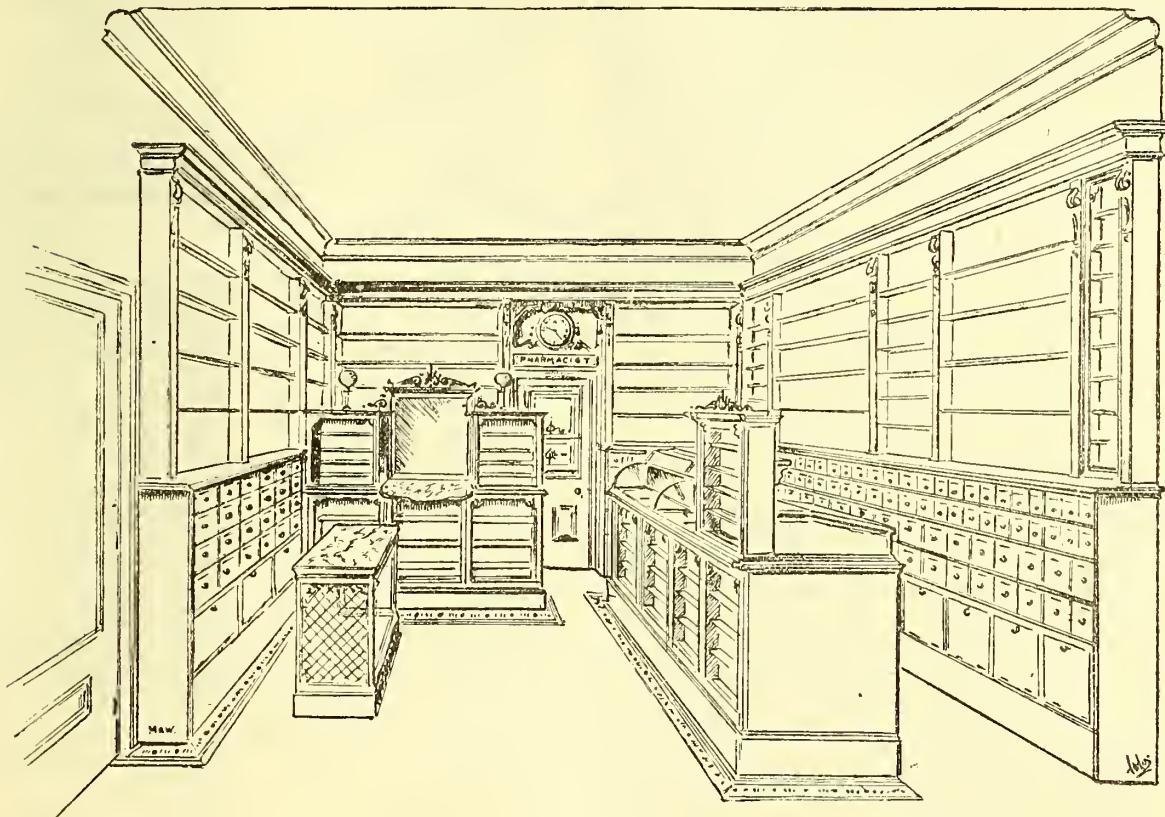
A tablespoonful to be taken occasionally in catarrhal affections.

How to Open a Pharmacy.

(BY ONE WHO HAS DONE IT.)

THE first thing which a chemist who contemplates opening a business has to do is to find a suitable site. Newly-opened neighbourhoods are for obvious reasons the most-sought-after positions, but sometimes a private house in the midst of a residential neighbourhood can be advantageously converted into a shop, as for a chemist's business it is not a *sine quâ non* that it be in a main thoroughfare. This remark applies, perhaps, with greater force to London and other large cities than to small country towns. Corner pharmacies are almost proverbial, but the higher rent demanded for corners should not be lost sight of, and, again, if the corner is not a right-angle awkward-shaped rooms have to be reckoned with. However,

was in the coloured supplement of THE CHEMIST AND DRUGGIST that I saw the notice of a "house and shop to let, suitable for a chemist, in a growing London suburb." I found this to be a corner shop, and, after exploring the neighbourhood, I concluded that it was a suitable position, and entered on negotiations for renting it. I found it best to leave this part of the business to a solicitor. He got several clauses to my advantage inserted in the agreement which I should never have thought of myself. The house being finished in all particulars as stipulated, I entered upon the responsibilities of a householder. I then interviewed the manager of the local bank,



these are matters which can be settled as they arise. My object is to describe the steps to be taken in fitting and stocking a shop, and give a plain record of personal experience—facts as I found them. After some years of assistantship in all sorts of businesses, including some which are historic, I began to think that my experience was sufficiently ripe to justify my starting a business on my own account. I possessed the sum of 500*l.*, about 100*l.* of which I had saved during my assistantship. I placed this 100*l.* apart for the purchase of household goods, using the remaining 400*l.* for business purposes. If I had had more money I do not think I should have spent it; on the other hand, if it had been less there are many items I could have somewhat curtailed. It

and left my capital in his safe keeping, and in return became the proud possessor of a cheque-book, which in the next few months I was destined to use freely. I then arranged to see a shopfitter on the premises, to follow out my wishes in the way of fittings. He took all particulars and measurements, and in a few days sent an estimate for fitting, in mahogany. The size of the pharmacy was about 18 by 14 feet, but not rectangular. A space 10 feet square was allotted to customers, the rest being occupied by counters, gangways, and wall-fixtures. The matchboarding was painted French grey before the shopfitters began their work. The two windows were enclosed to a height of about 6 feet from the ground with opaque glazed doors, and fitted with looking-

glass ends, and shelves of glass and wood to fit the positions. On the top of the window-enclosure the usual tramway for carboys was constructed. On the side of the shop facing the door were placed the drug-drawers—eighty in all—whilst over the drawers were the shelves for shop-bottles, and over all the cornice. On the return wall behind the dispensing-counter eighteen more drawers were placed and a cupboard, with shelving over as on the other side. On the third wall there was space for twenty-four more drawers and shelving. Beneath the nests of drawers in each case lockers were constructed for bottles and covered pots. A small poison cupboard was placed in a suitable space between the window and wall-fittings. The serving-counter had four glass cases on the front, with about thirty large drawers behind for paper, labels, corks, till, and stock. These drawers and many others I divided to suit the contents, being myself an amateur carpenter. On one end of the counter was an upright case for perfumes, behind which was a writing-desk. The rest of the counter was taken up by a long bent-glass case, with two spaces for serving. The dispensing-counter was at right angles with the serving-counter, and had in front three glass cases below and two on the counter, with a looking-glass and marble slab between. Behind was space for small drug-bottles, and beneath more drawers and some shelving for mortars, &c. I had the water laid on to this counter over a lead-lined sink. On the counter was a gas boiling-stove and Bunsen burner. The other gas-fittings were a central standard light on the counter, tapped on its side to take an atmospheric sealing-jet. Behind each carboy in the window was also placed a jet. I adopted the incandescent system of gas-lighting. I must not forget the outside lamp, resplendent in coloured glass, or the "syphon" gas-stove for heating the shop. The windows required fitting with blinds in the lower part: I had red blinds with lilac lettering. The floor in front of the counters was laid with thick plain linoleum, with a bright key-pattern border. At the door the floor was sunk an inch to receive a door-mat. The inevitable gong was on the door. I had the outside of the shop painted in black and gold, the name on the facia in plain old-style lettering. Some opal slips with appropriate lettering were stuck on the windows to hide the blinds in the upper part of the window-enclosures. There were also sun-blinds for summer use to provide. The floor of the entrance-lobby I had laid in white mosaic with my name introduced in red. This is about all the shopfitter's work: it came to just within 150*l.*

There was then the number of shop bottles and jars to reckon out. I required 30 4-lb. jars, 30 1-lb. jars, 48 32-oz. narrow-mouth bottles, 60 32-oz. wide-mouth, 82 20-oz. narrow-mouth, 84 20-oz. wide-mouth, 48 10-oz. narrow-mouth, 18 30-oz. syrup-bottles, 18 30-oz. capped oil-bottles, 8 2-lb jujube-jars, and 12 pill-vases. The dispensary required 48 stoppered 6-oz. flats (placed edgewise), 12 12-oz. and 96 4-oz. stoppered wide-mouth bottles. It required a lot of thought to fix what labels to have on the bottles and drawers. In the case of the drug-drawers, the most frequently required articles were arranged, for convenience, near the serving-counter. In many cases I had two drawers labelled alike, the one for the drug in bulk the other to contain weighed-up packages. The bottles and jars, with such items as five 8-gallon pear-shaped carboys, a specie-jar, sponge-case, clock, chairs, step-ladder, &c. (some of them bought second-hand) made up another 50*l.*

The following utensils and apparatus devoured a 20*l.* note:—Counter-scales and weights, dispensing-scales and weights, a set of "cup" weights, a set of French weights, glass and tin measures, soda-water and medicine baskets, label-damper, earthen mortars and pestles, iron mortar and pestle, pill-

tile, two pill-machines, sieves, pill-finisher, ointment-slab, drug-mill, tincture-press, plaster-iron, horn scoops, retort-stand, root-cutter, twine-box, water-baths, palette and cutting knives, bone spatulas, powder-folder, cork-presser, suppository bath and mould, composition and glass funnels, tinfoil, tow, split and plaster skins, glass tubing, evaporating-dishes, indiarubber bands, bottle-caps, dusters, towels, window-leathers, brass and indiarubber stamps, scissors, flasks, beakers, enamelled-iron saucepans, copper kettle, jugs, hammer, case-opener, invoice-files, muslin, stirring-rods, and tumblers.

As to labels, I had prepared the lists and drawn out the wording for these and counter-bills previously, and as soon as the agreement for the shop was signed put them in hand with the printers. I give the list of slip-labels, 1,000 of each being ordered:—

Dry.

Ammonia	Glycerine jujubes
Alum	Dr. Gregory's powder
Arrowroot	Lint
Bicarbonate of potash	Magnesia
Bicarbonate of soda	Nitre or saltpetre
Blanks	Oxalic acid—Poison
Borax	Permanganate of potash
Camphor	Precipitated ebaulk
Camphorated chalk	Precipitated sulphur
Chamomile flowers	Powdered rhubarb
Chlorate of potash	Red precipitate—Poison
Citrate of magnesia	Saline
Citric acid	Salt of lemons—Poison
Compound liquorice powder	Salt of tartar
Cotton-wool	Senna leaves
Cream of tartar	Sugar of lead—Poison
Crushed Hoised	Sulphate of quinine
The dentifrice	Tartaric acid
Epsom salts	White precipitate—Poison
Flowers of sulphur	

Wet.]

Almond oil	Red lavender
Camphorated chloroform	Rose-water
Camphorated oil	Sal volatile
Castor oil	Spirit of camphor
Chloroform—Poison	Spirit of turpentine
Creosote	Steel drops
Dill-water	Steel wine
Essence of lemon	Sweet nitre
Essence of peppermint	Syrup of buckthorn
Essence of senna	Syrup of rhubarb
Eucalyptus oil	Syrup of senna
Fluid magnesia	Syrup of squills
Friar's balsam	Syrup of tolu
Glycerine	Syrup of violets
Glycerine and rose-water	The black draught
Hair-oil	The cough mixture
Hartshorn and oil	The draught
Ipecacuanha-wine	The embrocation
Lavender-water	Tincture of arnica
Laudanum—Poison	Tincture of iodine
Lime-water	Tincture of myrrh
Methylated spirit	Tincture of quinine
Oil of cloves	Tincture of quinine (ammoniated)
Olive oil	Tincture of rhubarb
Opodeloc or soap-ointment	Toothache essence
Paregoric elixir—Poison	

Circular Labels.

Antibilious pills [two sizes]	Podophyllin pills [two sizes]
Cold-cream	Rhubarb pills [two sizes]
Confection of senna	Sulphur ointment
Golden ointment	Vaseline
Liver pills [two sizes]	White precipitate ointment
Mercurial ointment	Zinc ointment

Labels for Proprietary and Put-up Goods.

This will also serve as a list of the articles I kept ready for sale; 250 of each of these:—

Aperient lozenges	Cod-liver oil
Asthma-powder	Corn-cure
Bandoline	Cosmetic
Bay rum	Cough-lozenges
Benzine	Cough-mixture [two kinds]
Brillantine	Adult and Children]
Camphor cake	Cough-pills
Cascara elixir	Curry-powder
Castor oil	Dentifrices [Carbolic, Euca-
Cement	lyp's, Lemon, Quinine
Chemical food	Rose, Saponaceous]
Chlorate-of-potash tablets	Diarrhoea-mixture
Chilblain-paint	Digestive candy
Children's powders	Dusting-powder

Eau de Cologne	Myrrh and borax
Eau-de-Cologne salts	Neuralgia-mixture
Emulsion of cod-liver oil	Pepsin essence
Essence of almonds	Perfum's [Ess. Bouquet, Frangipanni, Jasmin, Jockey Club, Lily of the Valley, Millefleur, Opopanax, Rondeletia, Stephanotis, White Heliotrope, White Lilac, White Rose, Wood Violets, Ylang-ylang]
Essence of ginger	Pomades [Cantharidin, Jasmin, Marrow]
Essence of lemon	Quinine-and-iron tonic
Essence of saffron	Quinine wine
Essence of vanilla	Rheumatic mixture
Extract of malt [two kinds, Liquid and Solid]	Rheumatic pills
Face-powder	Saline
Florida-water	Sal volatile
Fluid magnesia	Sarsaparilla mixture
Fullers' earth	Seidlitz powders
Furniture-polish	Seltzogen-powders
Granular effervesing salts [Antipyrin, Carl-bad Salts, Citrate of Magnesia, Phenacetin, Sulphate of Soda]	Shaving-cream
Glycerine	Skin-emollient
Glycerine and cucumber	Sponge-cleaner
Glycerine jelly	Syrup of the hypophosphites
Glycerine and lime cream	Toilet-vinegar
Hair-restorer	Tonic elixir
Hair-washes [Locock's, Nutt's, Tonic, Wilson's]	Tooth-pastes [Areca, Cherry, Pearl]
Honey	Tooth-wash
Insect-powder	Toothache-cure
Lavender-water	Vaseline
Lavender salts	Vegetable tonic
Liniment [two kinds, Emulsion and Spirituous]	Vermi-killer
Liquid bluish	Violet-powder
Liquid cochineal	Winter smelling-salts
Liquorice-powder	Worm-cakes
Little liver-pills	
Marking-ink	
Milk of roses	

I am not a believer in stock labels, as the difference between the cost of them and of labels printed to order does not compensate for the great advantages of having one's name prominently displayed. Dispensing-labels I had lithographed—they comprised the usual blanks, mixture, outward application, pill, and ointment labels. I had also a price-list of proprietary articles (as a draw), handbills for my own specialities, a dispensing-circular, and an opening address. My proprietary mixtures I enclosed in card cases, but used the same labels for these as on the bottles. Other printing I had done was prescription, toothbrush, seidlitz-powder, and blank powder envelopes. It is convenient here to mention stationery, such as the various papers required—white demy, seidlitz blue, coloured, stearine, blotting, and filtering—and the various blank books, such as poison register, prescription, day, cash, till, want, and order books, retail and bought ledger; these, with bill-heads, twine, and sealing-wax completed this department, and together cost me 30*l.*

A sufficient assortment of bottles and boxes took another 10*l.* The following list does not include a few kinds of special bottles required for proprietaries, but allowance for them is made in the estimate. I may state, before proceeding further, that the tables given under "Opening a Chemist's Business" in THE CHEMISTS' AND DRUGGISTS' DIARY, 1890, were a great assistance to me, and I used them in compiling several of the lists which follow:—

White Vials.

6 doz. each 5*j.*, 5*ij.*, 5*ss.*, 5*j.*, 5*ss.*, and 5*ij.*

Dispensing, Best.

6 doz. each 5 <i>ij.</i> and 5 <i>iv.</i> ; plain	6 doz. each 5 <i>viii.</i> ; plain, 6 parts, 8 parts, and 16 parts
3 doz. 5 <i>iv.</i> ; 8 parts	3 doz. 5 <i>viii.</i> ; plain
6 doz each 5 <i>vj.</i> ; 6 parts and 12 parts	1 doz. each 5 <i>xij.</i> , 12 parts; 5 <i>xvi.</i> , plain; and 5 <i>xx.</i> , plain

"Poison."

3 doz. each 5*ij.*, 5*ss.*, 5*j.*, 5*ss.*, 5*ij.*, 5*ss.*, 5*iv.*, 5*vj.*, and 5*viii.*
1 " 5*x.*, 5*xij.*, and 5*xx.*

Stoppered, White.

½ doz. each 5*ss.*, 5*j.*, 5*ij.*, and 5*iv.*, n.m. and w.m.

Stoppered, "Poison."

½ doz. each 5*ss.*, 5*j.*, 5*ij.*, and 5*iv.*

Wood-top Bottles.

1 doz. each 5*j.*, 5*ij.*, and 5*iv.* w.m. 1 doz. each pill-bottles for 12 and 24 wood-top corks 2 " pomade-bottles, 1½-oz. and 3 oz.

Boxes.

½ grs. each 1 <i>d.</i> and 2 <i>d.</i> camphor-ball	3 doz. seidlitz-boxes, white enameled, purple edges, hinged lids
1 doz. each gazogene-powder boxes, 3 and 5 pints	1 " No. 14 turned wood boxes, beaded edges
1 gross 1 <i>d.</i> magnesia-boxes	2 grs. each willow boxes, 5 <i>j.</i> and 5 <i>ss.</i> , shallow
1 " 1 <i>d.</i> violet-powder boxes	12, and 24 willow boxes, 5 <i>j.</i> and 5 <i>ij.</i> , deep
3 doz. ½ lb. violet-powder boxes	3 grs. each German pill-boxes for 6, 1 " willow boxes, 5 <i>j.</i> and 5 <i>ij.</i>
½ grs. each German pill-boxes for 6, 1 " 12, and 24	1 doz. willow boxes, 5 <i>ij.</i>
3 grs. each p. o. pill-boxes, 5 <i>j.</i> and 5 <i>ij.</i>	1 doz. 4-oz. flat jujube-tins
3 doz. each white powder-boxes, slide, for 6 and 12	

Covered Pots.

1 doz. each 5*j.*, 5*ij.*, 5*ss.*, 5*j.*, 5*ss.*, and 5*ij.*, white thin ½ doz. each 5*ij.*, and 5*iv.*, white thin ½ oz. 4-oz. c. cream pots, burnt-in labels

½ doz. lip-salve pots, burnt-in labels 1 " 1½-oz. ditto, ditto

I need scarcely say that the beginner should consider well of whom he shall buy. If he has not come into contact with wholesale houses direct or through travellers, it is advisable to write to or call upon several and get terms. Opening orders are much sought after, and there is generally little difficulty in getting an extra discount or longer credit according to the circumstances. In the following lists I do not give prices, because these fluctuate greatly, and the lump sum suffices. It should be understood that in the first few months "wants" are cropping up all day long, many of which from local peculiarities it is impossible to anticipate.

Drugs and Chemicals.

½ gall. Acet. fusc. opt.	½ lb. Bacc. capsici
5 <i>j.</i> rub. idaei	1 " " " pulv.
5 <i>ij.</i> scilla	½ " " cubeb. pulv.
Winch. Acid acetic fort.	1 " " pinent.
½ lb. " glae.	4 oz. Bals. Canadens.
4 oz. " arseniosum	1 lb. " copaiba
1 " " benzoic.	1 oz. " Peruv.
1 lb. " boracic. pulv.	4 " " tolut.
1 " " caroolic. B.P.	4 " Bism. subcarb.
½ gall. " com.	4 " " subnit.
1 lb. " citric.	1 lb. Bole, Armenian
1 " " pulv.	4 " Borax crystal.
2 oz. " gallic.	2 " pulv.
8 " " hydrobromic. dil.	8 oz. Calamin. levig.
1 lb. " hydrochlor. pur.	4 " Calc. chlorid. pur.
Winch. " com.	4 " " phosph.
4 oz. " hydrocyan. dil.	2 " " hypophosph.
1 lb. " nitric. pur.	7 lbs. Cal. chlorinat.
2 " " com.	2 " Camphor in squares
2 " " oxalic.	1 oz. Cantharid. pulv.
1 " " phosph. conc.	50 Cap. papav.
1 oz. " pyrogallic.	1 lb. Carbo liq. levig.
1 " " salicylic.	½ oz. Carmine
1 lb. " sulphuric. pur.	1 lb. Caryophyllum
Winch. " com.	4 oz. " pulv.
1 lb. " sulphuros.	1 lb. Cera alb.
4 oz. " tannic.	1 " flav.
2 lbs. " tartaric. pulv.	1 " Cetacum.
1 " " xtl. parv.	8 oz. Cliretta.
3 " Adips prep.	4 " Chloral hydrate
2 " benz.	1 lb. Chlorof. meth.
8 oz. Æther. B.P.	60 grs. Cocain. hydrochlor.
1 lb. Aloes Barb.	30 " pur.
½ oz. " Socot. pulv.	8 oz. Coccaen. cacti
2 lbs. Alumen xtl.	60 gr. Codeina
4 " pulv.	4 oz. Collodion
½ lb. " excise.	8 " Cologynth. pulv.
½ " " Rupel.	4 " Conf. aromat.
4 oz. Ammon. bromid.	8 " " ros. canin.
4 lbs. " carb.	4 " " gallic.
1 lb. " chlor.	1 lb. " sennae
8 oz. " pur.	1 " Cort. aurant.
7 lbs. Amyl pulv.	8 oz. " canella pulv.
½ oz. Amv. nitrite	1 lb. " cascara
1 lb. Antim. chlor. liq.	4 oz. " cinch. flav.
2 " " nig.	4 " " rub.
2 oz. " pot. tart.	8 " " pulv.
1 " Antipyrin	4 " " cinnam.
1 lb. Aq. flor. aur. trip.	8 " " " pulv.
8 oz. " laurocorasi	1 lb. " limonis
2 lbs. " rosa trip.	1 " " querceus
1 " " sambuci trip.	4 oz. Crocosum.
½ oz. Argent. nit. cryst.	2 lbs. Creta gallic. pulv.
2 lbs. Arrowroot opt.	7 " " prep.
2 " St. Vin.	4 " " precip.
10 gr. Atropin. sulph.	½ oz. Croci stig.
	2 lbs. Capri sulph.

½ lb.	Curry-powder	4 oz.	Magnes. pond.	1 lb.	scillæ	1 lb.	Tamarinds
8 oz.	Dec. sarsap. co. conc.	1 lb.	" levis.	1 oz.	" pulv.	4 oz.	Terebene, pure
8 "	" a eos	1 "	" carb.	½ lb.	" valerian.	1 lb.	Tereb. Venet.
½ lb.	Emp. bellad.	2 "	" levis	1 "	" zingib.	4 oz.	Tinct. aconiti
½ "	" cantharidis	4 "	" cit. eff.	1 "	" pulv.	8 "	" arnicæ
½ "	" cerat. sapous	28 "	" sulph.	2 "	Resina flav.	Oj.	" aurant.
½ "	" opif	1 lb.	Manganæ. ox. nig.	8 oz.	Rouge	4 oz.	" bellad.
½ "	" picis	8 oz.	Manna	½ "	Saccharin.	Oj.	" benz. co.
1 "	" plumbi	2 lbs.	Mel	2 lbs.	Sacch. alb. pulv.	8 oz.	" buchu
½ "	" resinae	Oij.	Mist. sennæ co.	1 "	" lactis pulv.	Oj.	" calumba
½ "	" roboraus	½ oz.	Morph. acet.	1 "	" ustum	Oj.	" camph co.
½ oz.	Ergotin	½ "	hydrochlor.	2 oz.	Salicin	4 oz.	" cantharid. ind.
½ "	Enonymin	15 gr.	Mosch. gran.	½ "	Santonin	4 "	" cautard.
4 "	Ext. aloë aquos.	1 lb.	Mustard (seeds)	½ lb.	Sapo animalis	4 "	" c. psici
1 "	" antbenid.	2 "	" (pulv.)	2 "	" Castil.	8 oz.	" card. co.
2 "	" belladon.	Oil.	Naphtha	2 "	" mollis	8 "	" cascarill.
½ "	" cannab. ind.	1 oz.	Penepthe	1 "	Sein. anisi pulv.	Oj.	" catechu
4 "	" cinch. liqu.	½ lb.	Nux areca	4 oz.	" cardam.	Oj.	" cinchon.
½ "	" colch. acet.	4 oz.	" pulv.	1 lb.	" carni pulv.	4 oz.	" cinch. co.
4 "	" coloc. co.	½ "	" myrist.	½ "	" coriand.	4 "	" gelsemii
1 "	" casc. sagrada	Oj.	Ol. amygd. dulc.	½ "	" foeniculi pulv.	Oj.	" gent co.
4 "	" " liq.	1 oz.	" amar.	½ lb.	" tecum grec.	8 oz.	" guaiac. am.
1 "	" conii	1 "	" antechi Ang.	1 "	" hyscocy.	Oj.	" hyoscyami
4 "	" ergot. liq.	1 "	" anist	4 "	" lini	8 oz.	" lobelia
1 "	" filicis liq.	4 "	" bergamot.	28 "	" pulv.	Oj.	" lavand. co.
4 "	" gentian.	2 "	" caputputi	4 "	Soda bicarb.	½ lb.	" limonis
4 "	" glycyrh. B.P.	2 "	" carni	1 oz.	" bromid.	Oj.	" myrrh.
4 "	" " liq.	4 "	" caryoph.	2 "	" hypophosph.	8 oz.	" muc. vom.
2 "	" hyoscyami	4 "	" cassie	4 lbs.	" hyposulph.	Oj.	" opii
½ "	" nucis vomic.	½ "	" cinnam.	½ "	" phosphas	8 oz.	" pyrethri
1 "	" opif	4 "	" citronelle	4 oz.	" salicylas	Oj.	" rheo. co.
4 "	" rhei	1 lb.	" cocci uncif.	1 lb.	" sulphas pur.	8 oz.	" scilla
4 "	" taraxaci	1 oz.	" crotonis	4 oz.	" sulpho-carbol.	8 "	" seneca
4 "	Faba tonca	½ lb.	" cubeba	1 lb.	" tartarata	8 "	" sambul.
3 "	Ferri am. cit.	1 lb.	" eucalypti	Oj.	Sp. aether. nit.	8 "	" tolut.
8 "	" carb. sach.	1 oz.	" gauthieriae	Winch.	" am. arom.	8 oz.	" valerian.
2 "	" c. quin. cit.	½ "	" geranii	2 gall.	" vini rect.	8 "	" valer. am.
2 "	" pot. tart.	1 gall.	" jecoris	5 "	" meth.	Oj.	" zingib. fort.
2 lbs.	sesquioxid.	4 oz.	" junip. exot.	1 lb.	Stann. oxid.	1 lb.	Ung. hyd. fort.
1 "	" sniph. pur.	4 "	" lavand. exot.	2 oz.	Strychnia cryst.	4 oz.	" uit.
3 oz.	" granul.	4 "	" linnonis	4 lbs.	Succ. solazzi	1 "	" pic's liq.
4 "	Ferrum redact.	Winch.	" lini	1 "	" taxaxaci	1 lb.	" resinae
1 lb.	Flor. anthem. exot.	½ oz.	" m. pip. Anz.	7 lbs.	Sulph. sublim.	8 oz.	" sambuc. flor.
8 oz.	Fol. buchu	4 "	" exot.	4 "	" rotun.	4 "	Vanilla-pods
2 lbs.	" sennæ Tin.	½ "	" vir. Ang.	2 "	" precip.	5 lbs.	Vaseline
7 "	Fullers' earth pulv.	½ "	" neroli	2 "	" vivunt.	8 oz.	Vin. colchici
3 oz.	Glob. pulv.	Oj.	" nucis Persic.	Oj.	Syr. croci	Oj.	" ferri
1 lb.	Glob. prunell.	Winch.	" olivæ sublim.	Winch.	" fer. phos. co.	Winch.	" aurantii
Win. ij.	Glycérine	4 oz.	" second.	Oj.	" papav.	4 oz.	" pepsin.
½ lb.	Gran. parad. pulv.	4 oz.	" organi	Oj.	" rhamni	Oj.	" ipecac.
1 "	G. acacie sorts	½ lb.	" palmæ	Oj.	" rhei	1 oz.	Zinc. chloride
3 oz.	" ope.	1 oz.	" pimento	Oj.	" rhealdoes	2 lbs.	" oxid.
3 "	" pulv.	2 "	" pini sylvest.	Oj.	" scillæ	1 "	" sulphat pur.
3 "	ammoniacum	2 "	" pullegi exot.	Oj.	" sennæ	4 oz.	" sulpho-carb.
8 "	asafoetida	Winch.	" ricini	Oj.	" violæ	1 "	" valerianat.
8 "	benzoin.	4 oz.	" rosmar. exot.				
3 "	catechlin	1 lb.	" samb. virid.				
4 "	guaiac. pulv.	1 oz.	" santal. flav.				
3 "	juniper.	½ "	" sinapis e-seut.				
4 "	mastic.	1 lb.	" express.				
3 "	myrrh.	4 oz.	" sassafras				
8 "	" pulv.	8 "	" succini				
3 "	S. dracon. pulv.	Winch.	" terebenth.				
1 "	scammon.	8 oz.	" theobromatis				
1 lb.	shellac.	2 "	" verbuea				
4 oz.	tragac.	4 "	Opium				
8 "	" pulv.	2 "	" pulv.				
2 lbs.	Hordenn. perlat.	1 lb.	Oss. septic pulv.				
1 "	Hydrargyrum	½ oz.	Otto rose				
4 oz.	" c. cretæ	1 lb.	Ox. scillæ				
½ lb.	Hyd. ammoniat.	1 oz.	Pepsin				
½ oz.	" iodid. rub.	½ lb.	Pil. hydarg.				
½ "	" virid.	1 "	Piper nig.				
4 "	" ox. rub. levig.	1 "	" pulv.				
8 "	" perchlorid.	1 "	Plumb. acet. put.				
4 "	" subchlorid.	1 oz.	Podophyllum				
1 lb.	Hydrogen peroxid.	½ lb.	Potass. acet.				
4 oz.	Isinglass, Russ.	2 "	" bicarb. pulv.				
4 "	" Brazil.	1 "	" bichromas				
3 "	Inf. rose ac. conc.	1 "	" bromid.				
1 lb.	Insect-powder	1 "	" carb. pur.				
1 oz.	Iodum resub.	1 "	" chloras crys.				
1 "	Iodoform pulv.	1 "	" pulv.				
1 lb.	Jalapin	8 oz.	" citras				
1 lb.	Lapis punicis pulv.	4 "	" cyanid.				
1 "	Lichen Hybern.	2 "	" iodid.				
1 "	Icelandic.	4 lbs.	" permang.				
7 "	Lign. haematox.	1 "	" permang.				
2 "	" quassie	½ "	" sniph. pulv.				
8 oz.	sant. rub.	2 "	" tart. acid. pulv.				
8 "	Lin. acouti	2 "	P. glycyrrh. co.				
3 "	bellad.	4 "	Pulv. sciditz.				
Oj.	saponis	2 oz.	Quiu. sulph.				
Wiuch.	Liq. ammon. fort.	½ "	hydrochlor.				
1 lb.	bism. am. cit.	1 lb.	Rad. anchusæ				
4 oz.	Donovani	1 "	" calumba				
4 "	epispastis.	2 "	" gentian. Inc.				
8 "	feff. dialysat.	1 "	" glycyrrh.				
1 lb.	" percol. fort.	1 "	" pulv.				
2 oz.	" iodid. pro syr.	1 "	" ipecac. pulv.				
4 "	" phosph. pro syr.	4 oz.	" ipecac. pulv.				
2 lbs.	plumbi acet.	1 lb.	" iridis				
2 "	potasse	1 "	" pulv.				
1 "	sennæ dulc.	½ "	" jalap pulv.				
1 oz.	Littaria citras	½ "	" rhei				
4 "	Lycopodium	4 oz.	" pulv.				
4 "	Macis	½ lb.	" saræ Jam. incis.				

Lozenges and Jujubes.

½ lb.	Aperient	1 lb.	Ipecac. and morphia
½ "	Benzoin acid.	1 "	Lavender
1 "	Bismuth	1 "	Ponfret cake
1 "	Bath pipe	1 "	Musk
1 "	Black currant	1 "	Paragoric
1 "	" cayenne	1 "	Peppermiut
1 "	" cayenne	1 "	(extra strong)
1 "	Cachous (bouquet)	½ "	Rhatany
½ "	Calomel, 1 grain	1 "	Rose
1 "	Camphor	1 "	Soda and ginger
1 "	Cayenne	1 "	Tolu
1 "	Chlorate of potash	2 "	Acid lemon drops
½ "	Chlorodyne (C. B.)	2 "	Mixed fruit drops
1 "	Coltsfoot rock	½ doz.	Drops, 6d. bott. (assorted)
1 "	Digestive tablets	2 "	Brown candy
½ "	Red gum	1 lb.	Delectable jujubes
1 "	Gelatine	1 "	Mag. bonum
1 "	Ginger	1 "	Voice
½ "	Guaiaicum	1 "	Glycerine pastilles
1 "	Horehound candy	1 "	Crystallised (ass. rect.)
1 "	Ipecac.	1 "	Pate de Guimauve

Perfumes.

½ pint each	Ess. Bonquet, Heliotrope, Jockey Club, Lily of the Valley, Opopanax, Violet, Ylang-Ylang (In bals.)	½ doz.	2s. Gosnell's Cherry Blosom.
			1s. Greensill's Mona Bouquet.
			2s. 6d. P. & L. Opopoax

½ doz. 2s. Atkinson's White Rose

5 gross	Liver granules
½ lb.	Pil. " Liver"
1 "	Phosphori gr. ½
1 gross	" Quinine gr. ij.
2 "	" Calomel gr. ij.
1 "	" Calomel gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
1 "	" gr. ij.
5 gross	Tussis

Mineral and Aërated Waters.

1	doz. each Apollinaris, 1&1/2 pints	1	doz. Potash-water
1	" Jäscu ap, large	1	" Setzter-water
1	" Carlsbad	1	" Lemonade
1	" Franz Josef	1	" Ginger-beer
1	" Friedrichshall (quarts)	2	" Syphons soda-water
1	" Hunyadi (quarts)	2	" potash
1	" Ribbinat	1	" lemonade
1	" Seltzer (stone)	1	" seltzer-water
1	" Viehy (Celestin)	1	" lithia-water
1	" Ca-lsbad salts, 3s.	1	" ginger ale
1	" Soda-water	1	" "

Proprietaries and Patents.

The list which I give incorporates my running stock—i.e. things which during the past three years I have kept in stock because the sale for them is more or less continuous. The fact, however, should be recognised that in some places there is an exceptional demand for certain articles. In short, each person who reads this may be able to supply from his own experience certain deficiencies.

1	doz. Alcock's corn-shields, 1s. 1d.	1	doz. Fanning's lung-healers
1	" porous plasters	1	" Floriline, 2s. 6d.
1	" Allen's hair-restorer, 6s.	1	" tooth-powder, 1s.
1	" A. & H. cod-liver oil, 1s. 4d.	100	" Papier Monce
1	" ext. malt, 1s. 6d.	1	doz. Fowler's bay rum, 1s. 6d.
1	" castor oil, 6d.	1	" Frame food, 1s.
1	" Allinut's fumigating-paper	1	" 6d.
1	" Battle's vermin-killer, 3s.	1	" Gayetty's paper, 2s.
1	" Beecham's pills, 1s. 1d.	1	" Geraudel's pastilles
1	" B-etham's corn-plaster	1	" Godlardi's plate-powder, 1s.
1	" glycerine and	1	" Godfrey's elder-flowers, 2s. 3d.
1	" cucumber, 1s.	1	" Goscul's cherry tooth-paste, 1s. 6d.
1	" Bang's food, 1s. 6d.	1	" Hagan's magnolia balm
1	" liq. pancreat., 2s. 6d.	1	" Hartmann's wood - wool
1	" liq. pepticus, 3s.	1	" diapers, 1s.
1	" Bishop's eff. antipyrin, 2s.	1	" Hayman's balsam of horch-hound, 1s. 1d.
1	" " eaft. cit., 2s. 6d.	1	" Hinrod's asthma-cure, 4s. 6d.
1	" Carlsbad, 1s.	1	" Holloway's ointment, 1s. 1d.
1	" Blackwood's jatoline, 1s.	1	" " pills, 1s. 1d.
1	" Blair's gout-pills, 1s. 1d.	1	" Homoea
1	" Bond's Crystal Palace ink, 6d.; 1/2 doz. 1s.	1	" Hunter's chloral
1	" B-nd's genuine marking-ink, 1s. 9d.	1	" Jackson's liquid glue, 6d.
1	" Bovril, 1s. 4d.	1	" Jamm's fever-powder, 2s. 9d.
1	" Bow's liniment	1	" " herbal oint., 1s. 1d.
1	" Bragg's charcoal	1	" James' blister, 1s. 6d.
1	" " biscuits, 1s.	1	" " phosph. paste, 3d.
1	" " lozenges	1	" " " 6d.
1	" Brand's Al sauce, 1s.	1	" " Jewsbury's tooth-pst., 1s. 6d.
1	" " conc. B.T., tins, 1s.	1	" " Joyes' purifier, 6d.
1	" " " 2s.	1	" " 1s.
1	" " " essence, 1s. 6d.	1	" " Joy's cigarettes
1	" " " meat lozenges	2	" Judson's dyes (assorted), 6d.
1	" Bravais's dialysed iron, 3s.	1	" " gold paint, 6d.
1	" Brown's troches, 1s. 1d.	1	" " 1s.
1	" Bunter's nervine, 1s. 1d.	1	" " Kay's coaguline, 6d.
1	" Burgess's ointment, 1s. 1d.	1	" " 1s.
1	" Burroughs's hazeline, 1s. 6d.	1	" " ess. linseed, 1s. 1d.
1	" Bally's vinegar, 2s. 6d.	1	" " Kaye's Worsdell's pills, 1s. 1d.
1	" Butler's rosemary hair-cleaner	1	" " Kearsley's Weleh's pills, 2s. 9d.
1	" Calvert's acid, No. 5, 1s.	1	" " Keating's insect-powder, 6d.
1	" " " No. 2, 1s.	1	" " 1s.
1	" " " carbolic pdr., 6d.	1	" " bonbons, 1s. 1d.
1	" " " tooth-soap, 6d.	1	" " " cough-loz, 1s. 1d.
1	" Carter's little liver-pills	1	" " " Kepler ext. malt, 2s. 6d.
1	" Clarke's blood-mixture	1	" " " sol. of cod-liver oil, 2s. 6d.
1	" Clarke's ess. remnet	1	" " " King's dandel. pills, 1s. 1d.
1	" Cockle's pills, 1s. 1d.	1	" " " Lactopteine, 4s. 6d.
1	" C. B. chlorodyne, 1s. 1d.	1	" " " Lamplough's saline, 2s. 6d.
1	" " " 2s. 9d.	1	" " " Leath & Ross's glykaline
1	" " " Conly's fluid (crimson), 1s. 2s.	1	" " " neuraltue
1	" " " ozonised water, 2s.	1	" " " Leeming's essence, 2s. 6d.
1	" Co-greville's elixir, 1s. 1d.	1	" " " Liebig's Co. ext. meat, 1/2 oz.
1	" Coutts's acetic acid, 1s. 3d.	1	" " " 1 oz.
1	" Crosby's elixir, 1s. 1d.	1	" " " 2 oz.
1	" Cuticura	1	" " " Lloyd's eunexis, 1s. 6d.
1	" Davis's pain-killer, 1s. 1d.	1	" " " Loekyer's restorer, 1s. 6d.
1	" Diamond's dyes, 3d.	50	" " " Mustard-leaves
1	" " " 6d.	1	" " " Mackenzie's salts
1	" Dinneford's magnesia, 1s.	1	" " " Maltine, 2s. 9d.
1	" Du Barry's valentia, 2s.	1	" " " Marrig's almond tablets, 6d.
1	" Dunbar's alkaran	1	" " " Mellin's food, 2s. 6d.
1	" D. & F.'s heartburn-loz., 1s.	1	" " " Mexican hair-renewer, 3s. 6d.
1	" Durst's syrup, 2s. 9d.	1	" " " Möller's cod-liver oil
1	" Eadie's gout-pills, 1s. 1d.	1	" " " Mordan's gum, 6d.
1	" Ean de Cologoe (Gegen-über)	1	" " " M. & L.'s Florida water, 1s.
1	" Edgar's croup-lotion, 2s. 9d.	1	" " " Myocom fly-gum, 6d.
1	" Elliman's embroc., 1s. 1d.	1	" " " Nalline's dog-soap, 1s.
1	" Eno's fruit salt, 2s. 9d.	1	" " " worm-powders, 1s.
1	" Epp's glycerine jujubes, 7d.	1	" " " Neave's food, 1s.
1	" Fellows' syrup, 4s. 1s. 1d.	1	" " " Nelson's gelatine, 6d.
1	" Fennings's children's powders, 1s. 1d.	1	" " " Nestl's fool, 1s.

1	doz. Pears' blanc de perle, 1s. 6d.	1	doz. Scott's emulsion, 2s. 6d.
1	" rouz-e, 6d. packets	1	" pills, 1s. 1d.
1	" Pepper's tonic, 2s. 6d.	1	" 2s. 9d.
1	" sulpholine lotion, 2s. 9d.	1	" Scrubbs's ammonia
1	" Phosferine	1	" Seigel's syrup, 2s. 6d.
1	" Pond's extract, 1s. 1d.	1	" Singleton's ointment, 2s.
1	" 2s. 3d.	1	" Southall's sanitary towels, 1s. and 2s. (each)
1	" P. & L. ribbon de Bruges, 1s.	1	" Squire's chemical food
1	" Poor man's friend, 1s. 1d.	1	" Steedman's powders, 1s. 1d.
1	" Powell's bals. auiseed, 1s. 1d.	1	" Tabloids (B., W. & Co.'s) am-chloride, 6d.; 1/2 doz. cascara, 6d.; 1/2 doz. pot. chlor, 6d.; 1/2 doz. pot. and borax, 6d.; 1/2 doz. soda mint, 1s.
1	" Proctor's carpet-renovator	1	" Tamar indien
1	" Ridge's food, 6d. and 1s.	1	" Taylor's cimelite, 1s.
1	" Richardson's capsules of castor oil and copaiba (each)	1	" Terebene, 1s.
1	" Rigolot's mustard-leaves, 6d.	1	" Tidman's sea-salt, 1s. 2d.
1	" Rimmel's oatmeal, 6d.	1	" Townsend's sarsaparilla, 2s. 6d.
1	" rice-powder, 1s.	1	" Touga, 2s. 9d.
1	" toilet-vinegar, 1s.	1	" Towle's pills, 1s. 1d.
1	" Robinson's barley, 6d.	1	" Valentini's meat-juice, 4s. 6d.
1	" " " groats, 6d.	1	" Vaseline cold-cream, 9d.
1	" Roche's embrocation, 4s.	1	" " " purc, 6d.
1	" Rooke's pills, 1s. 1d.	1	" " " pomade, 6d.
1	" " " solar elixir, 2s. 9d.	1	" " " camph. ice, 6d.
1	" Rossetter's hair-restorer	1	" " " Vinolia cream, 1s. 9d.
1	" Rowland's kalydor, 2s. 3d.	1	" " " Wheeler's glyc. jelly, 6d.
1	" " " macassar oil	1	" " " Whelpton's pills, 1s. 1d.
1	" 3s. 6d.	1	" Williams' pink pills
1	" Rowland's odonto, 2s. 3d.	1	" Wiuslow's syrup, 1s. 1d.
1	" St. Jacobs oil, 2s. 6d.	1	" Wood's tooth-paste, 6d.
1	" " " Santias fluid, 1s.	1	" Woodcock's wind - pills 1s. 1d.
1	" " " powder, 1s.	1	" Woodward's gripe - water, 1s. 1d.
1	" " " Sauresse's saudal capsules, 4s. 6d.	1	" Wright's liq. carbonis, 4s. 6d.
1	" Savory's infants' food, 1s.	1	" Wright's coal-trsp. 6d.
1	" " " pane, emul., 2s. 6d.	1	" " " 1s. 6d.
1	" Schacht's liq. bismuth	1	" " " and toilet (each) soap, 6d.

Homœopathic Medicines.

If one can afford it, the best plan is to get a small counter-case with a selection of remedies; otherwise 1/4 dozen each 6d. and 1s. aconite, belladonna, bryonia, calendula, nux vom., merc. sol., and sulphur in pilules and tinctures, suffice to start. Also some camphor pilules and essence.

Soaps.

7	lbs. each Almond and glycerine, brown	3	doz. cakes Windsor (wrapped), 3d.
	" Castile, cur'd, honey,	3	" Margerison's assorted soaps, 3d.
	" oatmeal (3d. tablets)	4	lbs. Margerison's rose-soap
1/2	doz. boxes Albion milk-and-sulphur soap	4	" doz. cakes Osborne's baby-soap
1/2	" Calverts carbolic soap	3	" Pears' unscented, 6d.
1/2	" " " medical soap	1/2	" scented, 1s.
1/2	boxes Cleaver's terebene-soap	1/2	" sticks " shaving-sp., 1s.
1/2	cakes Colgate's Cashmere soap	1/2	" boxes Sulpholine soap, 1s.
1/2	boxes Cutieira soap	1/2	" cakes Wright's coal-trsp. 6d.
1/2	eakes Field's saphire soap	1/2	" boxes Vinolia soap, 1s.
3	" U.S. soap, 4d.	6	" " " 1s. 6d.
3	" Gibb's cold - cream soap, 6d.	6	" " " medical

Sponge.

1/2	doz. honeycomb, at 6s., 5s., 4s., 40s., 32s. doz.	1	doz. Turkey, at 40s. doz.
1	doz. ditto, at 22s., 9s., 4s. 6d. doz.	1/2	" ditto, at 22s., 9s. doz.

Teas, etc.

12	lbs. 2s. tea in 1/2 lb. packets	6	lb. coffee (in 1 lb. tins).
12	" 1s. 6d. tea in 1/2 lb. "	1/2	and 1/2 lb. Van Houten's cocoa
6	" 1s. 6d. tea in 1/2 lb. "	1/2	and 1/2 lb. Schweitzer's coccoatin
6	" 2s. Ceylon tea in 1/2 lb. packets	1/2	1 lb. Fry's concentrated cocoa
3	" " " "	1	1/2 lb. Fry's unsweetened condensed milk
12	lbs. 2s. tea in 1/2 lb. packets	6	lb. coffee (in 1 lb. tins).
12	" 1s. 6d. tea in 1/2 lb. "	1/2	and 1/2 lb. Van Houten's cocoa
6	" 1s. 6d. tea in 1/2 lb. "	1/2	and 1/2 lb. Schweitzer's coccoatin
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6	" 2s. Ceylon tea in 1/2 lb. packets	1/2	1 lb. Fry's concentrated cocoa
3	" " " "	1	1/2 lb. Fry's unsweetened condensed milk
12	lbs. 2s. tea in		

3 doz. each Court plaster, black, pink, and white, 1d. cases	1 doz. each ditto, tone, white bristle, 6.8 and 10 row
1 " ditto, black, 3d. cases	1 " Nipple-shields, black I.R.
1 " ditto, tri-coloured, 6d. cases	1 " Glass ditto, with black teats
3 gross Crow, duck, and goose assorted camel's-hair brushes	1 " Wansborough's ditto
1 doz. Swan-quill throat, on sticks	1 yd. Oiled silk
1 " Glass-eye bathes	1 doz. Powder-puffs, 6d.
1 " Higginson's enema	1 " boxes, 6d. to 1s.
1 " Ingram's ditto	1 yd. Spongio piline
1 " Single-eye-shades	1/2 doz. each Sponge-bags, cheec's, 4 sizes
1 " Double-eye-shades	3 " Bone shields for feeders
1 gross Fullers' earth, 1d.	1 " yds. Emp. adhesive on ungl. calico
1/2 doz. " 6d.	1 " Emp. saponis, on calico
1 " Alexandra feeding-bottles, 6d. black fittings	1 " Balsamic plasters (heart) (lung)
1 " ditto, white glass screw, black fittings, 1s.	1 " each Syringes, male (glass) 1/4 oz., 1/2 oz., 1 oz.
1 " ditto, 1s. 6d.	1 " Syringes, female (glass) 1/2 oz., 1 oz., 2 oz.
1 " Spare Alexandra feeders	1/2 " I.R. injection-bottles, bone nozzle, 1/2 oz.
1 " Flesh gloves, 6d.	ditto, 2 oz.
1/2 " each " assorted, 1s.	1/2 " I.R. ear-syringes, glass nozzle
1/2 " each China feeding-cups, gilt and blue	Shaving-brushes, English badger
1/2 " Table-filter	1 " ditto, hog hair
1/2 " Fumigating-pastilles, 6d.	Medium round bed-pan
3 " Goldbeaters' skin, 1d. cases	Medium slipper bed-pan
1/2 " each 3d. and 6d. ditto	Suspension bandages, cotton, ditto, silk
1 lb. G. P. tissue	ditto, cotton, No. 14
1 gross Glass tubes for feeders	Maw's plated S.W. Jap
1/2 doz. I.R. finger-stalls, black	Tooth-combs, transparent horn, assorted
3 " Earthenware union joints	1 " ditto, ivory, assorted
6 " I.R. teats, assorted	Tooth-brushes, assorted, 6d.
1/2 " Infants' feed warmer	3 " " " 1s.
1/2 " I.R. hot-water bottle, 6 by 10	3 " " " badger, 1s.
1 lb. Surgeon's lint	1/2 lb. Black indiarubber tubing (feeding-bottle)
1/2 doz. Glass leech-tubes	
1/2 " Medicine droppers in boxes	
1/2 " tumblers, in cases	
1/2 " ditto, with minim measure	
1/2 " Minim measures, in case	
1/2 " Medicine tumblers, loose	
1/2 " Maw's reg. earthen spoon	
1/2 " Proctor's measures	
1/2 " Nail-brushes, fibre, 6d.	
1/2 " ditto, 1s.	

When the stock was all put away and bottles arranged on the shelves, there were the medicine and methylated-spirit licences to see about, and a stock of medicine-stamps to get. It is not advisable to delay taking out fire and glass insurance policies. After a fortnight's hard work the pharmacy was ready to open, but for six months after I had very little spare time on hand, being busy all day putting up stock goods, and re-arranging stock in more convenient places.

Up to the day of opening I had paid or made myself liable for the sums mentioned in the following

Summary of the Cost of Fitting and Stocking a Pharmacy.

Shop-fittings	£150
Shop bottles and jars	50
Utensils and apparatus	20
	£220
Labels and stationery	£30 0 0
Bottles and boxes	10 0 0
Drugs and chemicals	40 0 0
Lozenges	4 10 0
Perfumes	2 10 0
Coated pills	2 10 0
Mineral waters	12 0 0
Proprietaries and patent	20 0 0
Homeopathics	1 10 0
Soap	7 0 0
Sponge	10 0 0
Tea	5 0 0
Druggists' sundries	25 0 0
	180
	£400

Since that time I have added photographic goods, which pay me well—but my task was to tell "how to" open a pharmacy, and that, I trust, has been accomplished.

PROFESSOR OLDBERG, of CHICAGO, has the idea that the way to make good pharmacists is to put boys (or girls) to a college of pharmacy for at least three years, then into a drug-store. Many people think the Professor is a crank, but his idea is catching on. Two years ago, when a CHEMIST AND DRUGGIST representative called on the Professor, he had three or four of these ideal pupils; this session, out of 225 matriculates 30 have had no previous drug-store experience.

Wounds.

A WOUND is defined as a recent solution of continuity or separation of parts naturally united. Some wounds are simple and easily treated, others involve danger to life and limb, and call for the best surgical skill. They range from a simple cut to a general smash-up of the entire organism, as in a railway accident. To Sir J. Lister is due the credit of introducing the antiseptic treatment of wounds. By means of this thousands of lives have been saved, and the whole practice of surgery revolutionised.

TREATMENT.

Arrest the Bleeding.—Haemorrhage, even of a most severe and dangerous kind can always be arrested by firm pressure. Therefore a surgeon instinctively places his finger on a bleeding surface, prior to taking more efficient measures to secure its arrest. If from an injury to a varicose vein the leg must be elevated. Slight bleeding from cuts will generally yield to the application of cold water and pressure.

To Antisepsise the Part.—All irritants, such as dirt, hairs, glass, should be removed by free bathing with 1 in 40 carbolic lotion or weak pot. permang. solution. A piece of clean rag or lint will serve as a sponge. A little iodoform or aristol applied to the part promotes rapid union and prevents festering.

To Promote Union.—The edges of a cut or wound must be brought into accurate apposition—if slight by means of plaster strips and if severe by silk, wire, or gut stiches. Then the part must be covered with wet lint and oiled silk, and allowed rest. The wound should be dressed every second or third day, and more iodoform placed on it. As a rule, adhesive plaster is irritating, and retards healing. It should only be using for approximating edges.

Lupus.

A SPREADING tuberculous infiltration of the skin is called lupus. Its chief seat is the face or nose, but it may occur in any part. It causes great disfigurement, and its course is slow. Lupus should not be mistaken for syphilis, which involves the inner parts also of the nose and probably the throat, nor for rodent cancer, which does not, like lupus, begin in early life. Lupus is a very rare disease, seldom seen even by ordinary practitioners, and it is fortunate that this is so.

TREATMENT.

Lupus should be treated as a very obstinate case of scrofula. Potassium iodide in large doses, sulphur, phosphorus, arsenic, cod-liver oil, hydrarg. biniodide, all exert more or less curative influence on lupus. Chaulmoogra oil is stated to cure in some cases. Superficial forms, which resemble eczema, will frequently yield to eczematous remedies alone.

Koch's Inoculations.—Although Professor Koch's inoculations have been found wanting, and have been proved to be dangerous, yet they established clearly the tuberculous nature of lupus, many cases of which were cured by them. A few cases died cured.

Sulphurous Acid.—The question of a local remedy is important to stay the ravages of the disease and heal up the infiltrated skin. Sulphurous acid applied frequently is almost a specific in some cases.

Ung. Acid. Pyrogallic. 1 to 10.—Excellent results have been obtained by the use of pyrogallic acid ointment.

Creosote.—saliyclic acid, iodide of starch, acid solution of nitrate of mercury, and many other remedies, have been suggested to be used topically, and creosote or cocaine can be added to diminish the pain that they usually cause.

Scraping.—Some surgeons believe in scraping away the diseased parts with a Volkman's spoon, under chloroform, and then dressing the parts with iodoform. This is successful, but heroic.

The Wholesale Drug-Trade of London.

IT will be of interest to readers of THE CHEMIST AND DRUGGIST to see a series of portraits of the members of the wholesale firms with whom they do business. In this first instalment of portraits we have limited our collection to London firms, and have chosen as our subjects those who may be more or less definitely described as members of the wholesale drug-trade. It has been pointed out to us, and it is, of course, a well-understood fact, that the term

"wholesale druggist," as now used, is a somewhat elastic one; and, indeed, some of the gentlemen whose portraits we give below are not quite entitled to the designation as it was understood a generation ago. We have preferred, however, to err in a latitudinarian direction, if at all, and to include in our series partners in firms who handle drugs in a wholesale way, even if they are not all prepared to fill miscellaneous orders for all sorts of drugs.



ARNOLD BAISS
(Baiss Bros. & Co.)



RICHARD BANKES BARRON
(Barron, Harveys & Co.)



EDWARD HARVEY
(Barron, Harveys & Co.)



R. KEY HARVEY
(Barron, Harveys & Co.)



WM. LAMOND HOWIE
(Barron, Harveys & Co.)



THOS. BURRIDGE
(Burgoyne, Buridges & Co.)



THOMAS FARRIES
(Burgoyne, Burroughs & Co.)



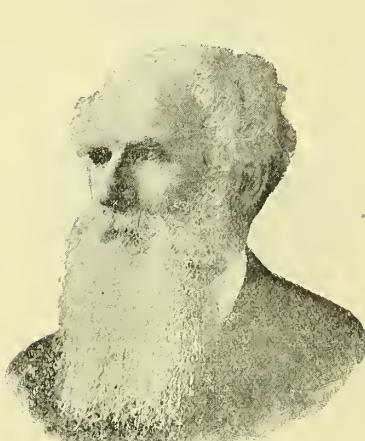
HY. GEORGE STACEY
(Corbyn, Stacey & Co.)



SAMUEL LLOYD STACEY
(Corbyn, Stacey & Co.)



J. W. DRYSDALE
(J. W. Drysdale & Co.)



EDWD. EVANS, SEN.
(Evans, Lescher & Webb)



FRANK HARWOOD LESCHER
(Evans, Lescher & Webb)



E. ALFRED WEBB
(Evans, Lescher & Webb)



FRED. W. FLETCHER
(Fletcher, Fletcher & Co.)



E. W. GRIMWADE
(Grimwade, Ridley & Co.)



MR. GRIMWADE, JUN.
(Grimwade, Ridley & Co.)



SYDNEY MORGAN
(C. R. Harker, Stagg & Morgan)



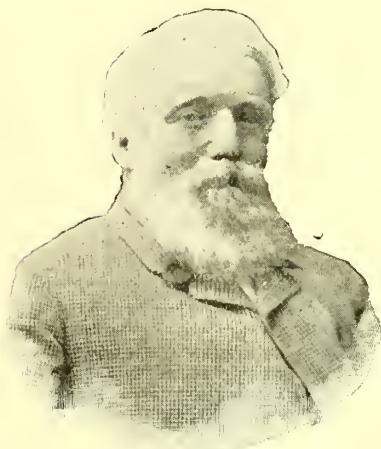
ROWLAND STAGG
(C. R. Harker, Stagg & Morgan)



G. BULT FRANCIS
(Hearon, Squire & Francis)



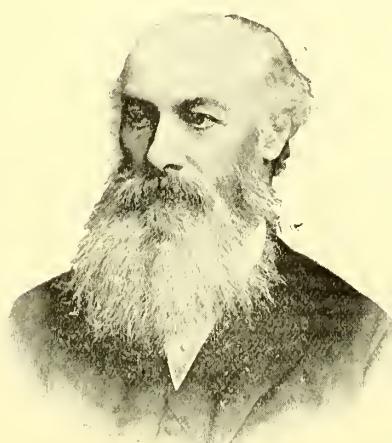
W. H. FRANCIS
(Hearon, Squire & Francis)



CHARLES JAMES HEWLETT
(C. J. Hewlett & Son)



JOHN COOKE HEWLETT
(C. J. Hewlett & Son)



ARTHUR BOWDLER HILL
(A. S. Hill & Son)



ALFRED CHARLES PRESTON
(Thos. Hodgkinson, Prestons & King)



J. CLASSON PRESTON
(Thos. Hodgkinson, Prestons & King)



HERBERT E. KING
(Thos. Hodgkinson, Prestons & King)



CHARLES HODGKINSON
(Hodgkinsons', Treacher & Clarke)



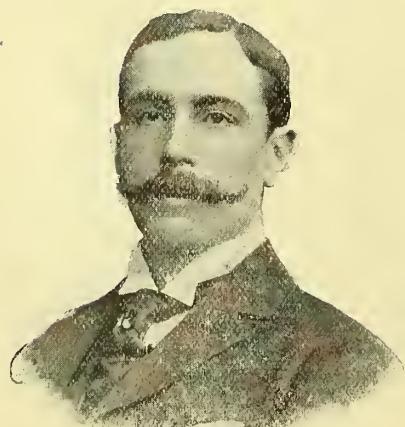
JOHN SLINGER WARD
(Hodgkinsons', Treacher & Clarke)



EDWARD HORNER
(Horner & Sons)



LEONARD HORNER
(Horner & Sons)



HORACE BROCKLESBY
(Lorimer & Co.)



JOHN LORIMER
(Lorimer & Co.)



O. GODDARD CLARKE
(Potter & Clarke)



HENRY POTTER
(Potter & Clarke)



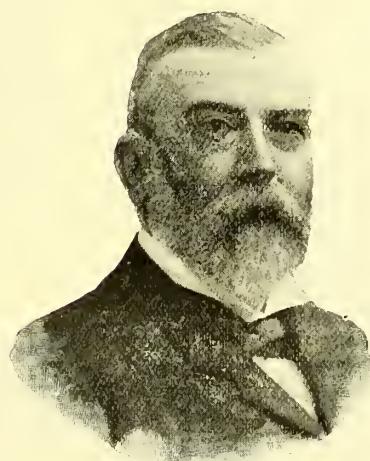
H. E. STEVENSON
(H. E. Stevenson & Co.)



CHARLES BUTLER
(Willows, Francis & Butler)



THOMAS HARPER FRANCIS
(Willows, Francis & Butler)



JESSE WILLOWS
(Willows, Francis & Butler)



F. N. LAYMAN
(Wright, Layman & Umney)



CHARLES UMLEY
(Wright, Layman & Umney)



JOHN C. UMLEY
(Wright, Layman & Umney)



H. CASSIN WRIGHT
(Wright, Layman & Umney)

Elias Bremridge.

WITH a pleasant recollection of many courtesies, official and non-official, recent and distant, the Editor of THE CHEMIST AND DRUGGIST called early this month on the ex-Secretary of the Pharmaceutical Society at his pleasant rooms in Montague Mansions, opposite the British Museum, to wish him "A Happy New Year."

There are still many hundreds of Mr. Bremridge's old friends in the pharmaceutical world who would have joined heartily in the wish, and who can picture to themselves from memory how cordially it was reciprocated. If any of them have ever been tempted to imagine that Mr. Bremridge's warm and genial greetings were part of his secretarial stock-in-trade, they are hereby assured that the old exuberant cheeriness has been by no means laid aside in his retirement.

In his 86th year Mr. Bremridge takes as keen an interest in the affairs of pharmacy as ever. Conversation turned on



the history which culminated in the Pharmacy Act of 1868. He still regrets that the Society did not secure a registration-fee, which he thinks it was justly entitled to, and then he got on to his favourite old topic of the Benevolent Fund. No chemist in business, he thinks, can be so poor as not to be able to subscribe at least half-a-crown a year, and he ought to do this even if he should have to sacrifice a few ounces of tobacco in the course of the year.

No one living could be more loyal than Elias Bremridge to the Society which he worked for so gallantly for so many years, but his faithfulness to his old love did not prevent him from saying a few nice things about THE CHEMIST AND DRUGGIST, which he still reads with pleasure. The portrait which we reproduce is from a photograph taken a few years ago by his old friend Mr. Mayall, of Brighton, and it is exactly like him now. Last summer he went down to Bournemouth, hoping to be there when the Conference came; but he found it too warm, and he had to return to London for re-invigoration. Herne Bay, he finds, suits him better than any seaside place. There he gets the open sea

right up to the North Pole, he remarked, and that should be far enough for anybody.

"We are a long-lived family," Mr. Bremridge said in answer to some remarks on his vitality. "My grandmother lived to 103, my grandfather died at 97, my father was killed by an accident at 76, and my mother was 84 when she died." Amid much thankfulness for the length of days and general good health with which he has been blessed, Mr. Bremridge interpolates as something approaching a grievance the statement that he insured his life in 1845, and has therefore now paid premiums for fifty years. "They had a good bargain when they took me," he observes; and the same remark may be made by the Pharmaceutical Society of Great Britain.

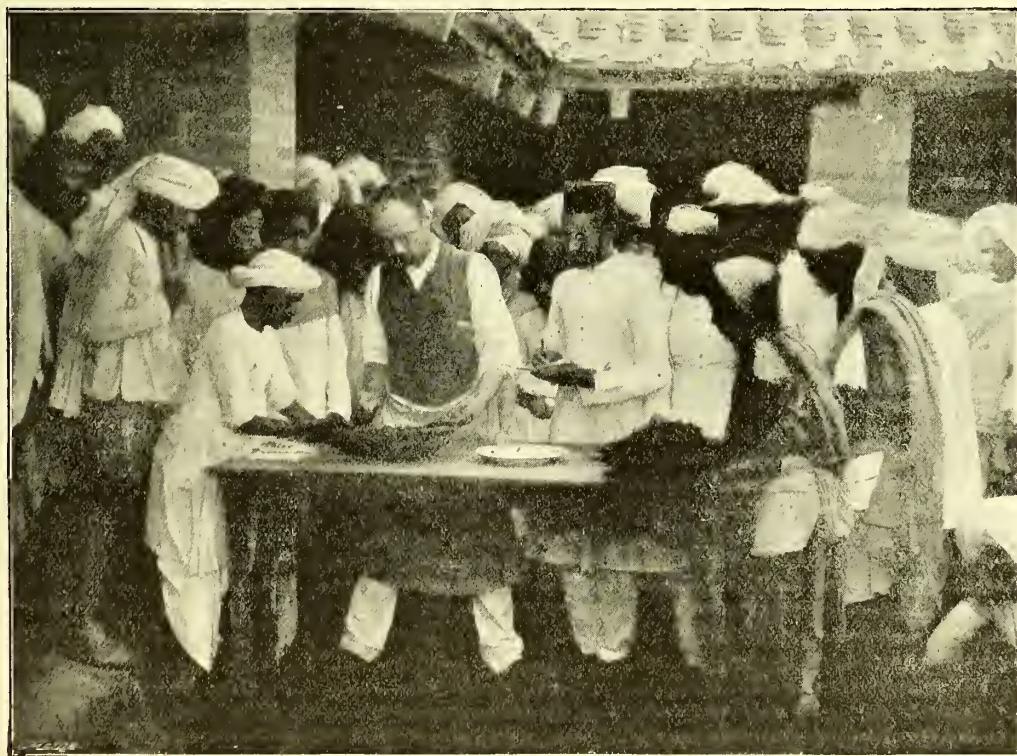
Indian Opium

UNDER the somewhat magniloquent title of "Just, Subtle and Mighty Opium," Mr. John Jennings has written a rather interesting account in a recent number of the *Ludgate* on the manufacture and trade in Indian opium. This variety of opium has never been of any practical pharmaceutical interest, and in spite of efforts which have from time to time been made to secure for it a foothold in European pharmacy, it is not likely that our Indian Empire will ever compete with Asia Minor so far as the supply of opium for druggists' purposes is concerned. We reproduce on the next page two of the illustrations in Mr. Jennings's article, because they represent two interesting features of the Indian opium industry. The first illustration shows the manner in which opium is manufactured in the Government works in Bengal. It is a matter of notoriety that a very considerable though declining portion of the revenue is derived from taxation on the opium which is produced in the large tract of country which stretches for a length of about 600 miles and a width of about 200 miles through the region watered by the Ganges river. In that district opium is the chief crop. It is gathered by the cultivators in March, packed in earthenware jars and sent off down the Ganges to the Government opium-factories, where every jar received is carefully weighed and analysed, and its value credited to the cultivator. The drug is then thrown into vats and kneaded into cakes for the market; this operation our first illustration shows. The Indian Government pay as a rule about 5s. per lb. for this opium, and the crop is a fairly remunerative one to the producer, as an acre of land in Bengal yields from 20 to 30 lbs. per year on an average. Our second illustration shows the European employé (whose duty it is to classify the opium received from the cultivator) at his work, assisted by a native, who writes down the results of the examination.

THE French Canadians have now a pharmaceutical journal of their own. It is called *Le Pharmacien Canadien*, and is published monthly at Montreal. The French-Canadian pharmacists have sometimes to cope with orders from illiterate customers which are even more puzzling than those which appear occasionally in our own "At the Counter," because the customer blends his vernacular French with the English name of the patent medicine or other remedy, both without any regard to the rules of spelling. From the bouquet of such flowers of illiteracy given in the *Pharmacien Canadien* we cull the following:—"German Comelle flours;" "nuthgol ointment;" "Balsas Baume pour le cotor;" "10 c. flay vajette. une boide de poudre avec une étampe rouge;" "1 onze d'eau pium camphrée;" "de la graise de mille pauvre homme;" "Tinture D'hiotte;" "Du Bhéromme;" "½ lbs. closada lime;" "Berom pour le peau;" "du soufre de ring 5 cent.;" "une Bouteille de Seauveur du Peuple;" "une fiole de Pinigarer, one fiole D'esprit parparmaine, un batan de récliche et pour 5 sennes de Sainné. Ces tout." All this was capped by an English wholesale house, who on a parcel of goods addressed the "Pharmacie Nationale," Montreal, as "the Natural Papiermache."



MANUFACTURING INDIAN OPIUM.



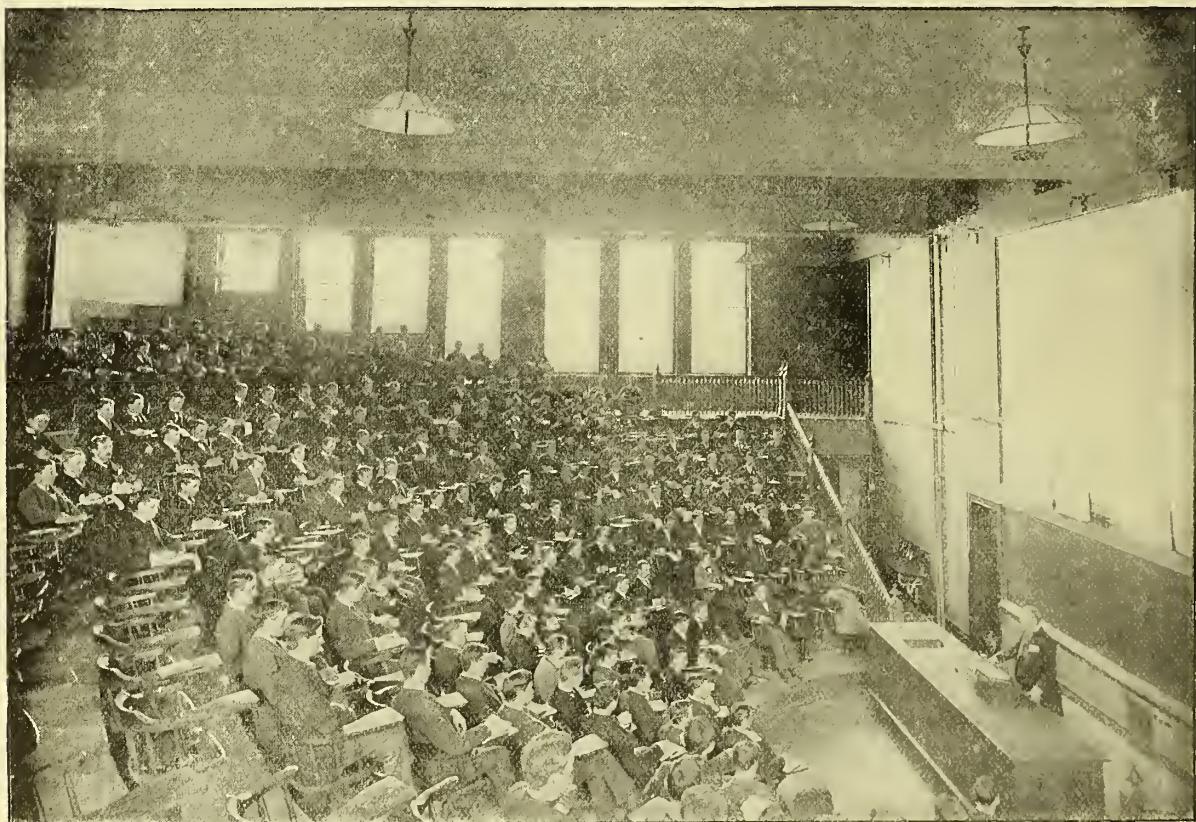
CLASSIFYING OPIUM.

NEW YORK COLLEGE OF PHARMACY.

Described by One who has Visited it and Watched the Work Done by the Students and the Professors.

THE New York College of Pharmacy was organised in the year 1829, and was incorporated by Act of Legislature in 1831. In the State of New York it occupies a position somewhat similar to that of the Pharmaceutical Society in Great Britain, but its powers are more limited. Its early career was somewhat chequered, and it was some time before the main object of its foundation—the organisation of a School of Pharmacy—was accomplished. Although courses of lectures had been given in various places, including the City Hall and New York Medical College, it was not till 1862 that the College secured rooms in the University building, where a proper system of tuition was afforded to the

storeyed structure, built of light-grey stone, buff brick, and terra-cotta, and is decorated with marble facings. The interior has been specially adapted for the purpose for which the institution was founded. The basement is devoted to the caretakers' rooms, engine and store rooms, and a gymnasium. The first floor contains the offices of the College, library, board rooms, and the Canby Herbarium Room. The herbarium is one of the largest in America, and was purchased by the College some years ago. On this floor are also situated the rooms of the Alumni Association and of the New York Section of the Society of Chemical Industry, as well as a special



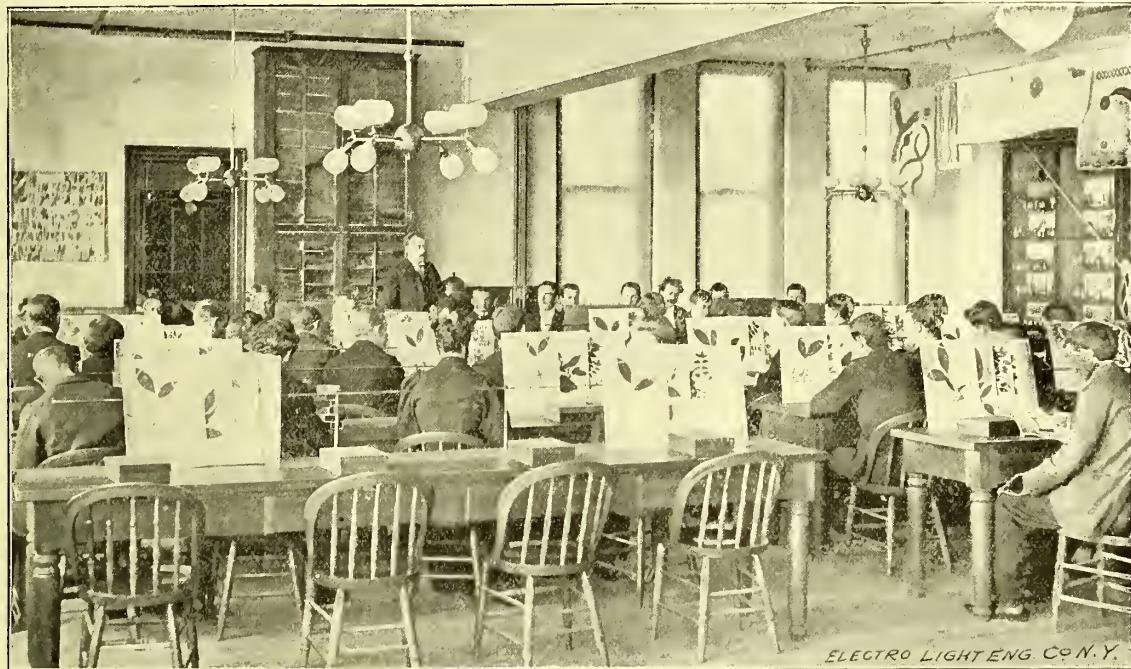
LECTURE THEATRE: PROFESSOR RUSDY AT THE TABLE.

few students who then deemed it worth their while to attend. In 1878 sufficient support had been obtained to enable the College to secure a building of its own, and an abandoned chapel in 23rd Street was secured and altered to adapt it to its new uses. This building did duty till the present year, when the new College, on West 68th Street, was completed. The new building is located in one of the best parts of New York, midway between Central Park and the Hudson River. While the College owes its existence almost entirely to the support of the retail drug-trade, the new building owes its existence chiefly to the generosity of the wholesale trade. It is a fine six-

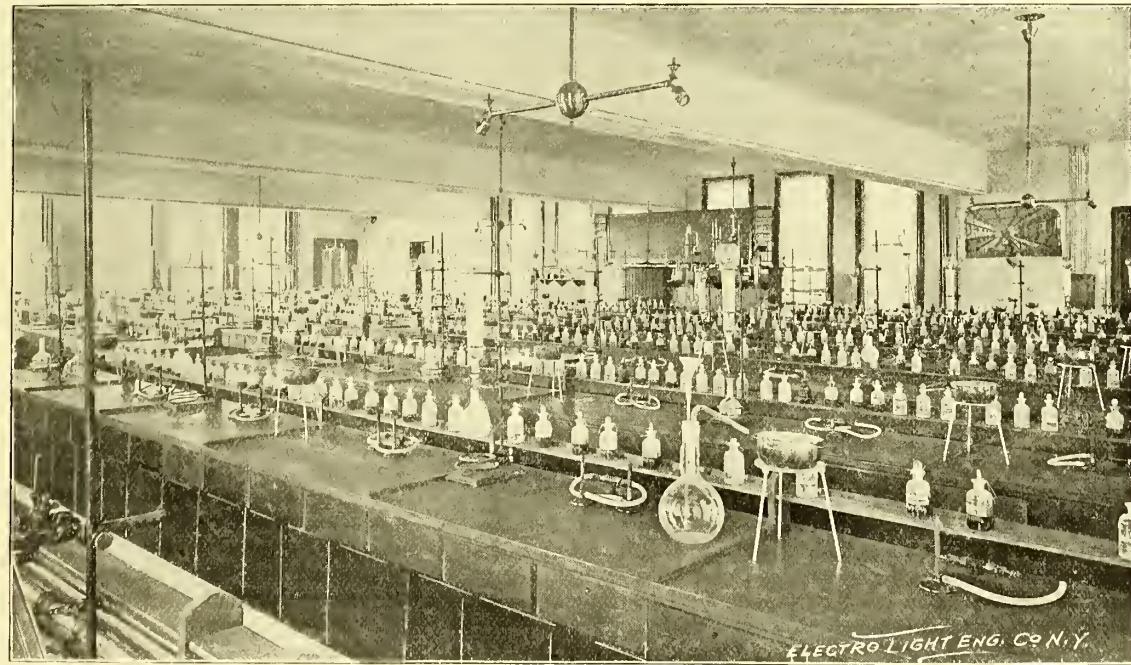
room for the use of lady students. The second and third floors are largely taken up by the magnificent lecture-theatre, which is without doubt one of the finest rooms of its kind in existence. It contains seating accommodation for 500 students, and is designed without pillars, so that the lecture-table is visible from all parts of the room. The seats are arm-chairs, arranged in tiers, and having on the right arm an extension so that students can take notes in comfort. The remaining space on these floors is devoted to "quiz-rooms" and lecture-preparation room. The fourth floor contains the *materia medica* and botanical museum, the microscopical laboratory with seating capacity for 100

students, together with special rooms for the professor and his assistants. The fifth and sixth floors are practically duplicates, and contain the chemical and pharmaceutical laboratories, each of which contains 150 benches. Extra

completely flooded without damage to the rooms beneath. The ventilation in the laboratories is so perfect that fume-chambers are practically unnecessary, and the combined operations of over 100 students hardly affect the atmosphere



BOTANICAL LABORATORY.



LABORATORY OF PHARMACY.

lockers are also provided, which serve for 400 students altogether. It is claimed that these laboratories are the finest of their kind in existence. The floors are of asphalt, and are water and fire proof; if necessary they can be

At the front of each room is an elevated desk and bench for the professor, so that each student can follow any experiment without trouble. The rest of the two floors contains rooms for the professors and their assistants, store and

balance rooms. So solid is the building, owing to its steel framework, that in the balance-room at the top of the building vibration is imperceptible. A glance at the various illustrations will show the excellency of the fittings better than any written description.

Under existing laws the College almost controls the practice of pharmacy in the State of New York, being thus an analogous body to the Pharmaceutical Society of Great Britain. All pharmacists must either graduate from the College or else pass the examination of the Board of Pharmacy, which latter is composed of examiners elected from among the members of the College, and is now practically part of the College itself. It is stated that no other diplomas are accepted in New York State in lieu of the examination; the English Major diploma is, however, generally accepted. For the Board of Pharmacy examination no curriculum is required, and the passing of it confers no title, but merely the right to practise. At the College a two years' course of study is required prior to graduation, which entitles the student to the degree of Ph.G., or Graduate in Pharmacy. A post-graduate course is to be inaugurated next year in order to confer the degree of Phar.D., or Doctor of Pharmacy.

The two years' curriculum is divided into a junior and senior course, each lasting from October to the end of April. No Preliminary examination is required, except that every student must pass an examination in arithmetic prior to or during the junior course. The subject is taught in the College, and is obligatory for all students except those who pass prior to entering, and no diplomas or certificates are accepted in lieu of it. The subjects taught in the College are the same as those required for the Minor, with the addition of elementary physiology. Examinations are held at the end of each course, and the student must pass the junior examination prior to taking the senior course. The rating in the junior examination also counts in the graduating examination at the close of the course. The latter examination is by no means so severe as the English Major, but a rather more extended knowledge is required than for the Minor. At the same time the lectures cover as much ground, and in some subjects more, than does the Major syllabus. The methods of teaching adopted in American schools of pharmacy have come in for caustic criticism at the hands of English visitors, probably from insufficient study of the better class of schools. A careful study of the methods pursued in the New York College of Pharmacy should convince even the "bigoted Britisher" that the system of tuition is distinctly in advance of that obtaining in any of the English schools or colleges of pharmacy. The principal difference in the methods adopted in the College and in the Bloomsbury School of Pharmacy, for example, lies in the fact that whereas in the latter the lecture is considered to be the chief part of the professor's work, and the application of it is left largely to the student, in the New York College the lecture and its application go side by side. A brief glance at the methods adopted by the professors in their various subjects will make the above clearer.

Chemistry is under the supervision of Professors Chas. F. Chandler and Arthur Elliott, the former of whom has been professor in the College for twenty-six years, and the latter for thirteen years. Professor Chandler, who is also professor at the Columbia College School of Mines, lectures only on organic chemistry, of which subject he is one of the foremost exponents in the States. Dr. Elliott, who is probably well known to many English chemists as former editor of *Anthony's Bulletin*, has charge of the chemical laboratory, and also lectures on physics and inorganic chemistry. The professor's system in the chemical laboratory may be con-

cisely described as an application to chemistry of the kindergarten principle. At the commencement of the day's work apparatus and reagents exactly similar to those possessed by the student are arranged on the professor's table. The subject of the day's work is then carefully and briefly explained, after which the professor proceeds to demonstrate the particular work to the students, and, as he proceeds, each is required to perform an exactly similar experiment. In this way the student becomes perfectly familiar with the details of his work, and does not fall into the habit so common among those who learn their analysis from books and charts of adding reagent after reagent with but the faintest idea of the purpose of the addition. After the demonstration the students proceed to apply the particular test or tests to other substances. The quickness with which the students pick up their knowledge, and their success in the examinations, amply testify to the soundness of the professor's system.

Botany and *materia medica* are in charge of Professor H. H. Rusby, who is well known as an expert on educational affairs. The professor's idea in teaching botany—and this is not only the case in this department, but in the chemical department as well—seems to be to teach the science as applied to pharmacy and as an aid to the study of drugs rather than as a science *per se*. There is no complaint in the College of lack of specimens. At the lectures, in addition to the exhibition of charts, models, and occasionally lantern-slides to illustrate plant-structure, each student is provided with mounted specimens, so that he is able to see in the plant itself the particular part under discussion. The College possesses an immense number of these specimens, mostly collected and prepared by the professor himself. Dr. Rusby makes a point of giving dried rather than fresh specimens for examination both at the lecture and in laboratory work arguing that as most of the materials reach the pharmacist in this condition, he should therefore be expert in the examination of such. At the same time the examination of plants in the fresh state is not neglected. The student has further the privilege, for a nominal fee, of joining the excursions and lectures of the Torrey Botanical Field Club during the summer months. In addition to the lectures, a very complete course of laboratory work is given in the fine laboratory. A good series of papier-maché models of the various parts of a plant materially aids the professor in his demonstrations.

Materia medica is taught on similar lines. At each lecture the student is provided with a partitioned box, containing anywhere from six to a dozen drugs. The common adulterants are also included and each drug is taken up its characteristics explained, and then one of detecting adulterants, and the student follows the lecturer with his own specimen. Each student is provided also with a mounted specimen, showing the general characteristics of stem, leaves, flowers, &c., of the plants from which the particular drugs under consideration are obtained. These specimens are very valuable, and have been mostly collected by the professor, who has been and is still a great traveller. The students are allowed to keep the specimens of drugs provided, so that at the end of term each one has a complete collection of the principal drugs. The senior course in *materia medica* is largely devoted to the microscopical study of drugs, and in this study duplicate slides are provided for comparison with the student's prepared specimens, so that no part of the structure should escape attention. The museum attached to this department is very complete, considering its comparatively short period of existence. The collection of cinchonas is exceptionally fine, and is said to contain a sample of the bark from every known variety.

Pharmacy is taught by Professor Virgil Coblenz, a graduate of Berlin and Philadelphia, and who is perhaps best known to English pharmacists by his work on "Terpeneless Oils." As would be expected from the pharmaceutical products imported into England, this is the subject in which Americans excel, and the reason for it lies largely in the fact that the teaching of pharmacy, theoretical and practical, is considered the most important part of the curriculum. Here, again, a radical difference is noted in English schools, where, both in the teaching and in the examinations, the pure sciences are considered of more importance. It follows, therefore, that while the American pharmacists are not equal to their English *confrères* in purely

student a better pharmacist than six in the average drug-store.

The lectures and demonstrations are so arranged that students, who find it necessary, can spend part of their time in a store, and this is an advantage to many who otherwise could not afford to attend. Lectures commence each day at 1.30, and work goes on till 6, and the whole of the intervening period is thoroughly utilised. The time is divided somewhat as follows:—From 1.30 to 2.30 there is a lecture; from 2.30 till 6 half the class (usually numbering about 120 students) will work in the chemical laboratory, whilst the other half will be split up into three sections, and will work in turn at, say, practical botany and *materia medica* for one



CHARLES F. CHANDLER, Ph.D., M.D., &c.,
Professor of Organic Chemistry.



GEORGE A. FERGUSON, Ph.B.,
Professor of Analytical Chemistry and
Mathematics.



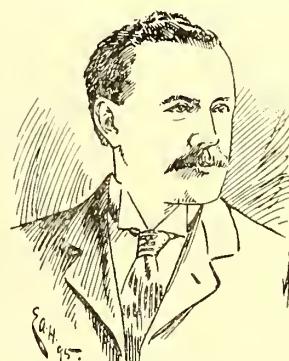
VIRGIL COBLENTZ, A.M., Ph.D., F.C.S.,
Professor of Pharmacy.



ARTHUR H. ELLIOTT, Ph.D., F.C.S.,
Professor of Chemistry and Physics.



HENRY H. RUSBY, M.D.,
Professor of Physiology, Botany, and
Materia Medica.



SMITH ELY JELIFFE, M.D.,
Professor of Pharmacognosy.

scientific attainments, they are as a rule better pharmacists. The course of lectures delivered by Dr. Coblenz is very complete, and is supplemented by a very extended course of laboratory work which is demonstrated in a similar way to the work in the chemical laboratory. The manufacture of practically every preparation in the U.S.P. is performed by the student, and in addition a large amount of work usually carried out in the chemical department is here carried out in the pharmaceutical, such as the assay of drugs, chemicals, extracts, and the preparation of certain organic products. In the manufacture of all preparations and in dispensing, the professor requires his pupils to perform their work with the simplest tools, and the skill attained by some of the students is remarkable. With only mortar, spatula, and pill tile many will turn out pills, suppositories, and even lozenges equal to those turned out by the manufacturers. The two years' course under Professor Coblenz will render the

hour, the two sections not so engaged being meanwhile subjected to a "quiz." By means of these "quiz classes," two or three of which are held every day, the student gets a thorough drilling in the various subjects.

In addition to the classes and lectures, arrangements are usually made by the professor of pharmacy to enable the students to visit the more important chemical and pharmaceutical manufacturing houses in New York and vicinity, and observe the actual preparation on the large scale of products used in pharmacy. These visits are much appreciated by the students. A word must be said as to the influence exerted by this College, which, it is safe to say, has not only been of benefit to American pharmacy, but to the nation as well. It was a former President of the College, Mr. John Milhau, of the classic pharmacy on Broadway—the American "Bell's" one might say—who in 1848 secured the passage of the law prohibiting the importation of drugs into the

country without examination as to their quality. In the enforcement of this law it was found that the examiners at the various ports had different ideas as to the standard of purity required, and a call was made to the colleges of pharmacy requesting their aid in deciding these points. This meeting was held in 1851, and established rules regulating the admission of drugs and chemicals. The attending members met again in 1852, and issued a call for a general participation by pharmacists, and thus was originated the American Pharmaceutical Association—a body occupying much the same position to American pharmacy that the British Pharmaceutical Conference does to English pharmacy. The New York College, together with the American Pharmaceutical Association, has secured for pharmacists adequate representation on the Pharmacopoeia committee. The record of the College is one of which the members may be justly proud. Although constantly hampered by lack of funds, and often in debt, the College has steadily progressed, and has been ably helped by its teaching staff, many of whom years ago worked without remuneration or for a nominal fee. To its credit is the fact that never has aid been sought from either city or State, and the institution has never been smirched by the touch of the professional politician. Moreover, it has secured control of the State Examining Board of Pharmacy, and prevented the positions on that Board from being converted into plums for the reward of the designing politician. In its presidents the College has been singularly fortunate, and the present one (Mr. Samuel W. Fairchild) is by no means the least of them all. To his efforts the College is largely indebted for the possession to-day of one of the finest, if not the finest, college of pharmacy in the world.

We acknowledge our indebtedness to the President and Professors of the College for the facilities which they have afforded our contributor in the preparation of this article. The photographs showing the students at work were specially taken, and the reproductions given in the previous pages have not appeared before.—ED. C. & D.

A WINTER'S EPISODE.

'TWAS Friday night in January, when winds blow fierce and cold,
The Diary was at my side, the C. & D. unroll'd—
The "daily" I'd glanced o'er to see if anything were new,
'Twas somewhat late, the fire was out, and I felt rather "blue."
And trade was had, and no mistake: instead of buying pills,
The folk were paying all they had for gas and water hills;
Prescriptions, they of late were few, and penny custom great—
It takes so much to fill a till, and that was how 'twas late.
As slowly up the stairs I went I stumbled and then fell,
And as I struggled to my feet—there—someone rang the bell.
The light went out, what could I do? I hadn't got a match;
I bruised my hands, my head, my toes, and couldn't find the latch.
At last the door I open'd wide, and own I was perplexed,
To see a little tattered chap—no wonder I was vexed.
"What do you want, what make you here, you little scamp?" I said;
"It's time such little boys as you were fast asleep in bed."
I spoke too sharp, the tears came down—it hurt him I believe;
To wipe them off as they roll'd down, he used his jacket sleeve.
"Is baby bad?—be quick my boy—or mom or daddy ill?
What do you want, some castor oil, or antibilious pill?"
And then he wiped his eyes again, and said he wanted "nuffin"—
I could have punched his head in two, the little ragamuffin!
Then through his tears he seemed to smile, and soon he gave a chuckle
And said—"Gaffer, if yer duuno mind, a Becham's horrie."
"You little cheeky imp!" I said (my indignation rose)—
He used his jacket-sleeve again to wipe his little nose;
"What impudence! you little wretch, for this I'll make you suffer"—
He put his fingers to his nose and said—"Garn, yer bally huffer."
So quick I raised my slipper'd foot, and gave him such a crack
Just where his legs would join unto the bottom of his back;
And my feelings were consoled a hit, and I felt a thrill of joy
As I heard a howl of pain arise from that miserable boy.

ACETUM.

Chemistry Eighty Years Ago.

MR. J. BURT, of Worthing, sent us some time ago a manuscript volume of chemistry notes, taken by Robert D. Thomson, at the Glasgow University, in the 1828-29 session, when Professor Thomas Thomson, M.D., occupied the chemistry chair. There are so many associations connected with the book—it recalls so much of the history of chemistry at the beginning of this century—that a lengthy reference to it is pardonable. In the first place, the chair of chemistry in the Glasgow University is a notable one in the annals of science-teaching in this country. It was instituted as a lectureship in 1747, so we are told, by Mr. W. Innes Adamson, the Assistant-Secretary of the University, to whom we are indebted for some historical information. The first lecturer was William Cullen, M.D., who in 1751 added to his duties those of the King's professorship of medicine. Cullen was appointed professor of chemistry at the Edinburgh University in 1756, and ten years later was elected to the chair of medicine, in which capacities he so advanced the Edinburgh Medical School that his influence seems to be felt still, and Edinburgh medical graduates speak of him with reverence. Cullen's successor in Glasgow was Joseph Black, M.D., whose discoveries were the first symptoms of the new era of chemistry which overshadowed and blotted out the old alchemic faiths before the eighteenth century expired. Black lectured in Glasgow for ten years, when he went to take Cullen's place in Edinburgh. We know little of the four men who immediately succeeded him in Glasgow. John Robison, LL.D., was appointed in 1766; William Irvine, M.D., in 1769; Thomas C. Hope, M.D., in 1787; and Robert Cleghorn, M.D., in 1791. Nothing remains of any of them, except four manuscript volumes of lectures, by Hope, in the Chemical Society's library. Following Cleghorn came Thomas Thomson, M.D., with whom we are immediately concerned.

He was born in Crieff, that most salubrious of Scotch rural towns, in the year 1773, and, after some private schooling at home, was sent to the Grammar School of Stirling; thence to St. Andrews University; and from there he went to Edinburgh with the view of studying for the ministry. He actually attended a divinity course or two, but also entered the surgical classes at the medical school, and in 1795-96 attended Black's chemistry lectures. He became thoroughly enamoured of chemistry, but was sensible enough to go forward to the M.D. degree, which was, indeed, at that time the only gateway to a scientific career. Meanwhile, Thomson was supporting himself with his pen, and as his brother, Dr. James Thomson, was editor of the "Encyclopædia Britannica" he got plenty of work from him, writing most of the chemistry articles. In 1796 he actually succeeded to the editorship of that portentous work, so that he must have been an exceedingly erudite young person. From that year until the last one of the century, when he gave up the editorship of the "Encyclopædia," Dr. Thomson was a prolific writer chiefly of critical essays, and for fifty years there was no contemporary chemist in this country who wielded such a prolific pen. There is much in common between Thomson's life in Edinburgh and Carlyle's twenty years later. Both brought their first grist to the mill by encyclopædia work, and, curiously, Thomson was the particular friend of James Mill, whose son, John Stuart Mill, was afterwards to be the intimate of Carlyle. But this is wandering from the main point. In 1800 Thomson started extra-mural lectures in chemistry at the Scotch capital, apparently with much success, for his fees the first year amounted to 187*l.* 10*s.* He continued to lecture until 1811,

the rest of his time being filled up by literary work. Thus, in 1802, he published a "System of Chemistry" (4 vols.), which ran into four editions up to 1810, when he finished his celebrated "History of the Royal Society." This book became the turning-point of his career. His name was now known on the Continent, and in 1812 (when the "History" was published, and his idea of migrating to the metropolis was approaching a fixed purpose) he ventured as far as Sweden, apparently with the object of making the acquaintance of Berzelius. When he returned he took up his abode in London, started the "Annals of Philosophy" (now merged in the *Philosophical Magazine*) in 1813; married Miss Agnes Colquhon in 1816, taking up residence in the Queen Square, Westminster, James Mill sharing the house with him; and in 1817, through the influence of the Duke of Montrose, was appointed by George III. to the Glasgow University chemistry lectureship. Early in the following year the King endowed the chair, whereby it became a professorship; and about the same time Dr. W. J. Hooker was appointed to the chair of botany in the University.

Robert Dundas Thomson, the writer of the notes before us, was his nephew, and, as stated, attended Dr. Thomson's lectures in 1828-29 when proceeding to the M.D. degree, which he took along with C.M. in 1831. He was for some time an assistant-surgeon in the H.E.I.C. service, and was in an independent position in London in 1841, when his uncle asked him to go to Glasgow to act as his *locum-tenens*, as he was getting frail. He recommended his nephew for the position because he considered him "fully as well qualified for the chair as any individual, without exception, in Great Britain"; the Senatus duly approved. Young Dr. Thomson occupied the position until 1852, when, after his uncle's death, he returned to London. Here he was appointed professor of chemistry at St. Thomas's Hospital Medical School, and was examiner in chemistry to the University of London. He married his cousin, the only daughter of Dr. Thomas Thomson, and died at Richmond in 1864, aged 53. Professor Thomson's eldest son was also Thomas Thomson. He was a physician attached to the Indian army, and was one of the celebrated captives at Cabul. After his release he was professor of botany at Calcutta. He was a competent botanist, and made a study of the Punjab flora.

The interest of this brief narrative would not be com-

plete without mention of the fact that Prof. J. Millar Thomson, of King's College, the senior Secretary of the Chemical Society, comes of a branch of the family. His grandfather, Dr. John Thomson, who was professor of surgery and pathology at the Edinburgh University, and Dr. Thomas Thomson were related. The family, through different branches, have given no fewer than six professors to Scotch Universities, and the influence of the family upon medical and scientific education in Scotland has been remarkable. We are indebted to Professor J. M. Thomson for the portrait of Dr. Thomas Thomson which accompanies this article. It is from a fine carbon print of the portrait in the collection of the Philosophical Society of Glasgow.

THE NOTES.

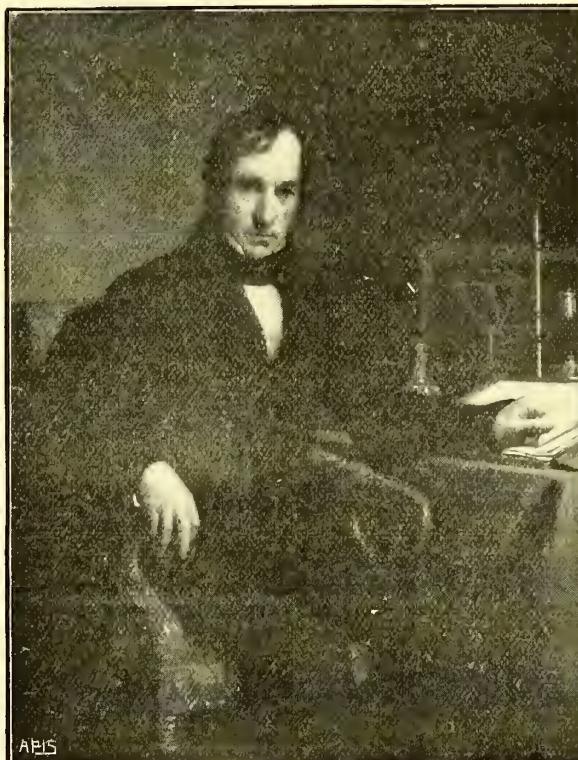
When Robert D. Thomson on November 7, 1828, commenced the notes of his uncle's lectures he was a youth of 17, and there is internal evidence in the 450 octavo pages, to which the notes extend, that his uncle closely supervised his studies. Indeed, it almost seems possible that these notes are actual transcripts of the lecturer's notes, for they are written in the first person throughout. The course of lectures extended to April 28, 1829. It began with a brief history of recent progress in chemistry, Black's name coming first with the following brief paragraph, which may explain the comparative silence of his contemporaries in this country regarding his work:—

"Black's discoveries were all made before the age of 34, and owing to indolence he did not prosecute his discoveries so much as he ought."

Cavendish, Priestley, Lavoisier, Guyton Morveau, Kirwan, Sir H. Davy, Mr. Dalton of Man-

chester, Dr. Wollaston, Berthollet, Gay-Lussac, Vauquelin, Menard, Stromeyer, G. Mellin of Heidelberg, and G. Mellin of Tubinburg, the Rosas of Berlin, Mitchenlen of Berlin, and Berzelius of Upsala were the other chemists mentioned, with the observable eccentricities of spelling. Finally, the first lecture concludes with a recommendation of the best works for study—viz., Henry, Turner, Murray, and Berzelius, in 5 vols. The recommendation to study five volumes of Swedish is delicious; but it seems that that was not an unknown tongue in Scotland in those days, and a French translation may have been available. As an appendix to the lecture, we note these baits to the industrious:—

"Prizes for this year—1828-29.



THOMAS THOMSON, M.D., F.R.S.

Professor of Chemistry in the University of Glasgow 1827-52.

From a photograph by Professor J. M. Thomson of the painting in possession of the Philosophical Society, Glasgow.

"I. For examinations: (1) for first year's students, (2) for second year's students.

"II. Prize Essay to be given in on the 1st of March—on the Theory of Vapor, Elasticity, Spec. Grav., Quantity in the Atmosphere, &c.

"Prize Essay for 1829-30.—The Best Account of the Chemical Decompositions Produced by Galvanism, with a Theory of the Mode of Action of the Galvanic Battery.

"For 1830-31.—On Respiration."

The first of the lectures are on physical subjects, beginning with heat, and they are all treated in an exhaustive manner, many of the facts mentioned being from the lecturer's own observation. It was not until January 2, 1829, that chemistry proper was entered upon, and then the course goes on much in the present fashion, greater attention being given to the metals (which were divided into families) than is the case now. In such a volume we naturally find many facts which have been lost sight of, and some which have an interest of their own, or as coming from the man whom continental chemists considered to be the only English chemist worth speaking about, although Sir Humphrey Davy and "Mr. Dalton" were then alive. We shall now confine ourselves to extracts from the pages, adding such comments as appear to be *à propos* in parentheses.

"Dr. Irvine has distinguished himself in ascertaining the latent heats of bodies." [This is a tribute to a predecessor who followed up Black's work in the same subject. The latent heats of ice, sulphur, spermaceti, beeswax, lead, zinc, tin, and bismuth are given.]

"Liquids in *vacuo* boil 145° lower than in air. Mr. Barrie, of London, prepares vegetable extracts in this way, and he distils oils also. All these extracts contain phosphoric acid, and they could not therefore be employed in medicine." [This is a reference to Mr. Barry, of Allen & Hanburys. He first described his vacuum-apparatus in the *Medico-chirurgical Transactions* of 1818, but it took many years before the value of the invention was recognised; even the late Professor Redwood spoke somewhat lukewarmly of it in 1842. In 1825 Professor W. T. Brande said of it: "Mr. Barry's contrivance is one of the best that have been invented." The reason which Dr. Thomson gives for the non-appreciation of the extracts is peculiar. We have not observed it before. Two years ago, Mr. W. Ransom, of Hitchin, informed us that when first introduced vacuum-prepared extracts were a failure because they did not keep. Dr. Thomson is wrong, we think, regarding the distillation of oil by Mr. Barry's apparatus. It was a Mr. Tritton's which was used for this purpose.]

The steam engine is described: "By Mr. Watt's improvement also the moving power is the steam, while formerly it was the external air." [Then there is added in a later handwriting] "The last time Dr. Thomson saw Mr. Watt he had a long conversation with him respecting his engine. Mr. Watt said that there had [been] about 130 improvements upon his engine, but that upon a rigid examination he was satisfied his was the best."

"Common air has been subjected to a pressure of 810 atmospheres, which is equal to water, without producing any effect. The same occurs with azote and hydrogen." [At that time the critical temperature of gases was unknown, otherwise we should have been saved *fin de siècle* wrangles.]

"High-pressure steam-engines are prohibited by Act of Parliament. From the experience of Watt it appears that [?] spirit] distilled at a low heat *in vacuo* is as expensive as in the ordinary way." [We do not see the connection here.]

"Mr. Cavendish adopted the opinion that combustion was a whirling motion of bodies, but I never could get an explanation of this from him. Dr. Black taught an improved theory of combustion as early as 1773, as I know from MS. notes of his lectures." [The latter sentence seems to refer to the notes of the lectures which Thomson took at Edinburgh in 1795-96. The theory of heat was in an unsettled state in 1828, for Dr. Thomson stated in the next lecture, "We must confess our inability to solve the problem whether heat is a body or a quality."]

"The word affinity was introduced by Dr. Hooke." [The lecturer's Glasgow rival, Dr. Andrew Ure, does not mention this fact in his "Dictionary" published in 1827.]

"I dissolved the eighty thousand millionth part of a grain of nitrate of lead, and made it visible by sulphuretted hydrogen." [A remarkable experiment. Subsequent research notes in the MS. volume by Thomson and his nephew show that he was a careful manipulator.]

"The simple bodies at present known are fifty. They may be divided into supporters, combustibles and incombustibles. The names are perhaps not well chosen, but they are good enough if we understand what we mean by them."

"Mr. Watt favoured the idea that gases would be used in medicine. Dr. Beddoes made a number of experiments. He found that oxygen hastened the unfavourable termination of consumption. I have little doubt that a combination of carbon and oxygen might be found which could be breathed like common air, but how far it would be useful in medicine remains to be determined." [Oxygen is now a valuable therapeutic agent for lung-troubles.]

"Bromine was discovered in 1825 by Mr. Balard, an apothecary, of Montpelier. He obtained it from the mother water of the salt marshes in the South of France. . . . According to Balard its atomic weight is 95. Levec makes it 105."

"Iodine is obtained from waste soaper's leys." [The explanation of this almost forgotten fact is given by Ure: "Pump-wells and springs in the neighbourhood of waste-soap works, where kelp has long accumulated, are necessarily impregnated with iodine. . . . Scotch soap manufacturers use scarcely any other alkaline matter for their hard soaps except kelp." Dr. Ure accordingly set about devising a process for isolating the iodine, and succeeded.]

Protoxide of azote [*i.e.*, laughing-gas] "produces intoxication. It produced no effect upon many persons. It produced no effect upon Mr. Watt, his wife and son, Dr. Duncan or Dr. Gregory." [From a foot-note we learn that "Dr. Thomson tried its effects on these individuals (the doctors) while in Edinburgh." Gregory was the inventor of pulv. rhei co.]

Phosphorus "is now manufactured only by one house near London." [? By Godfrey & Cooke.]

"Arsenic is used as a medicine, and was first recommended by Dr. Jacobi in the *Memoirs* of the Mentz Academy for 1757. Dr. Fowler, of Stafford, however, was the first who showed that it might be used with perfect safety. His formula is to mix 64 gr. arsenious acid, 64 gr. carbonate of potash, $\frac{1}{2}$ lb. water in a Florence flask. The flask is to be put on a sand-bath and gently boiled till the arsenious acid be completely dissolved. When the solution is cold $\frac{1}{2}$ oz. of compound spirit of lavender is to be added and as much distilled water as will make the whole liquid weigh a pound. . . . Dr. Fowler recommends from 2 drops to 12 twice or oftener a day. The quantity of carbonate of potash . . . is not sufficient to saturate the arsenious acid—we should employ 83 gr. instead of 64. But I would recommend, in order that we may be always certain of having the medicine in the same state, to employ 125 gr. bicarbonate of potash for every 64 gr. arsenious acid. The preparation would in this case be a definite compound." [The foregoing is the original formula for Fowler's solution. It remained practically unchanged until the 1885 B.P. made it a 1-percent. solution. The United States Pharmacopœia follows Thomson's suggestion regarding the use of bicarbonate.]

"The effect which arsenic produces on copper is very striking, and might be employed to detect its existence. We may mix the residue of the evaporation of the contents of the stomach with a little black flux; put the mixture between two thin plates of copper, and heat the whole to redness. If arsenic be present the copper will assume a white colour." [This is a precursor of Reinsch's test. We do not find it mentioned in cotemporary literature.]

"Dr. Pearson analysed James's powder, and found it to consist of phosphate of lime, united with the different oxides of antimony in various proportions. He suggested a formula for preparing it. [Which is quoted—viz., the double fusion of sulphuret of antimony and hartshorn shavings.] This is the pulvis antimonialis, and is more employed, I believe, than any other antimonial preparation whatever.

"Nothing can be conceived more unscientific than such a preparation, and it reflects but little credit either upon the

chemical skill, or medical experience of the three colleges, that such a preparation should have been suffered so long to disgrace the *Pharmacopoeias*. It is a very uncertain preparation. . . . James's Powder was used at first to cut fever short. It is quite a different preparation than it was fifty years ago. Dr. Elliottson, of St. Thomas's, gave pulv. antim. 1 oz. a day for a week, without any effect. . . . I gave 100 gr. of it a day for a week without effect. . . . It is quite a harmless substance." [These were common statements in those days, but Dr. Thomson, who was somewhat noted for acridity of criticism, spoke out more freely regarding *Pharmacopoeia* compilers than others of his time.]

"Calomel is prepared by triturating together 34 parts of corrosive sublimate and 25 mercury in a glass mortar." [Why sublimation was omitted does not appear.]

"When the ore of platinum is dissolved in aqua regia a quantity of dark matter remains. Mr. Tennant, by treating it with nitrate of potash and distilling, obtained osmium in solution, and by dissolving what remained in muriatic acid he obtained iridium." [This was in 1803, and the discoverer was Smithson Tennant, of Glasgow. Descotils discovered it independently.]

"Writing-ink is best made in the following proportions:—

Boil 2 hours

1 oz. logwood
3 oz. nutgalls
2 quarts water
1 oz. sulphate of iron
1 oz. gum arabic
1 oz. lump sugar

Cloves or oil of cloves to prevent mouldiness, or corrosive sublimate." [The traditional formula.]

"Essential oils. . . . I made a set of experiments to determine their constitution, but they varied so much at different times that I found it impossible." [For almost half a century this condition of things continued.]

"Linseed oil. . . . The making of printer's ink is kept a secret. The best is made in London and Paris."

"The water of the Clyde is remarkably pure. In 10,000 gr. in winter I found only $1\frac{1}{3}$ gr. of foreign matter, consisting of silica." [What a contrast to the Clyde of to-day!]

"The difference between potash and pearlash is that potash contains the insoluble part of the ashes, and pearlash is pure. We used formerly to get potash from Russia, but we now get most of it from North America. The common form contains a great quantity of potash, and hence it is made in considerable quantity in England." [Nowadays the bulk of pearlash comes from France and Germany, the Canadian being rather expensive.]

"Magnesia was discovered at Rome and was called Powder of Count Palma. An advertisement was pasted up in Rome praising it as a cure of all diseases. . . . Henry's calcined magnesia is obtained from magnesian limestone, but with care it might be obtained equally pure from sea-water."

"By the Excise laws no vinegar can be exposed to sale unless it contains at least 5 per cent. of acid. In London the second-priced vinegar contains 8 per cent., while the highest-priced contains much less. The Glasgow vinegar generally contains sulphuric acid. When vinegar is distilled it is colourless. Some years ago Mr. Macintosh distilled vinegar by means of steam. He purified by means of lime, added sulphuric acid, and then distilled. . . . Distilled vinegar was formerly called acetous acid, but it is the same as acetic acid containing only a greater quantity of water. Strong acetic acid is made by Mr. Turnbull, of Glasgow. In summer the crystals are liquid, sp gr. 1.06296—

Acid.	Water.	Acid.	Water.
1.06296	1 + 1	1.06820	1 + 5
1.07060	1 + 2	1.06708	1 + 6
1.07084	1 + 3	1.06349	1 + 7
1.07132	1 + 4	1.05974	1 + 8

This shows we cannot judge of its strength from its specific gravity. The excise judge of it by employing lime, and concluding from the quantity of acetate of lime formed. The accuracy of this mode, however, has not been verified by experiment." [Turnbull's acetic acid is still manufactured in Glasgow, if we are not mistaken.]

Cream of tartar . . . "its medical properties, I consider, connected very much with its little solubility." [This is a most curious but uncorroborated observation.]

"Last summer [1827] an apothecary in Glasgow formed a very curious double salt with magnesia—1 atom tartrate of magnesia and 2 atoms bitartrate of magnesia."

It will be seen from the foregoing notes that the lectures extended to the chemistry of the carbon compounds; they finished up with physiological chemistry, the analyses of urine, and concretions receiving special attention. Following these lectures are notes on a course of mineralogy, and the book terminates with a score of notes of researches undertaken by R. D. Thomson, in conjunction with his uncle. These are largely concerned with minerals, mineral waters, and soils; in fact, the book is rich throughout in information regarding the spas of the day. In the forties, R. D. Thomson published a number of works on agricultural chemistry, in which he was assisted by his uncle, and it is apparent that before the influence of Liebig was felt in this country these men had recognised the importance of chemistry in its application to agriculture.

The Pills.

(After Poe.)

HEAR the 'prentice with the pills,
Silvered pills!

What a weary quarter-hour their preparation fills!

He doth tinkle, tinkle, tinkle,
With the pestle all his might,
And with powder he doth sprinkle
All the pills that soon will twinkle
Argentif'rous to the sight.

They go round, round, round
(Stop! there's one upon the ground!)

In a pot with fitting lid, in which mucilage he spills
'Pon the pills, pills, pills, pills, pills,
To the lessening fulgence of the pills.

(After Byron.)

Roll on, thou pill, upon the ground—roll on!
Ten pairs of feet sweep over thee in vain;
I'd gladly rescue thee, but 'tis well known
I'll never, never look on thee again!
Thou'ret lost! become indeed a fugitive,
'Twere idle to assume I could thee catch.
There is indeed but one alternative—
I must proceed to make another batch.
Great Heaven! 'tis closing time! I'll strike just one
more match!

(After Macaulay.)

"Curse on him!" quoth the Senior;
"What dost thou, loitering clown?
But for this stay, ere close of day,
We might have roamed the town!"
"Heaven help him!" thought the errand-boy,
"That pill to bring to light;
Such cruel delay can only mean
No play for me to-night!"

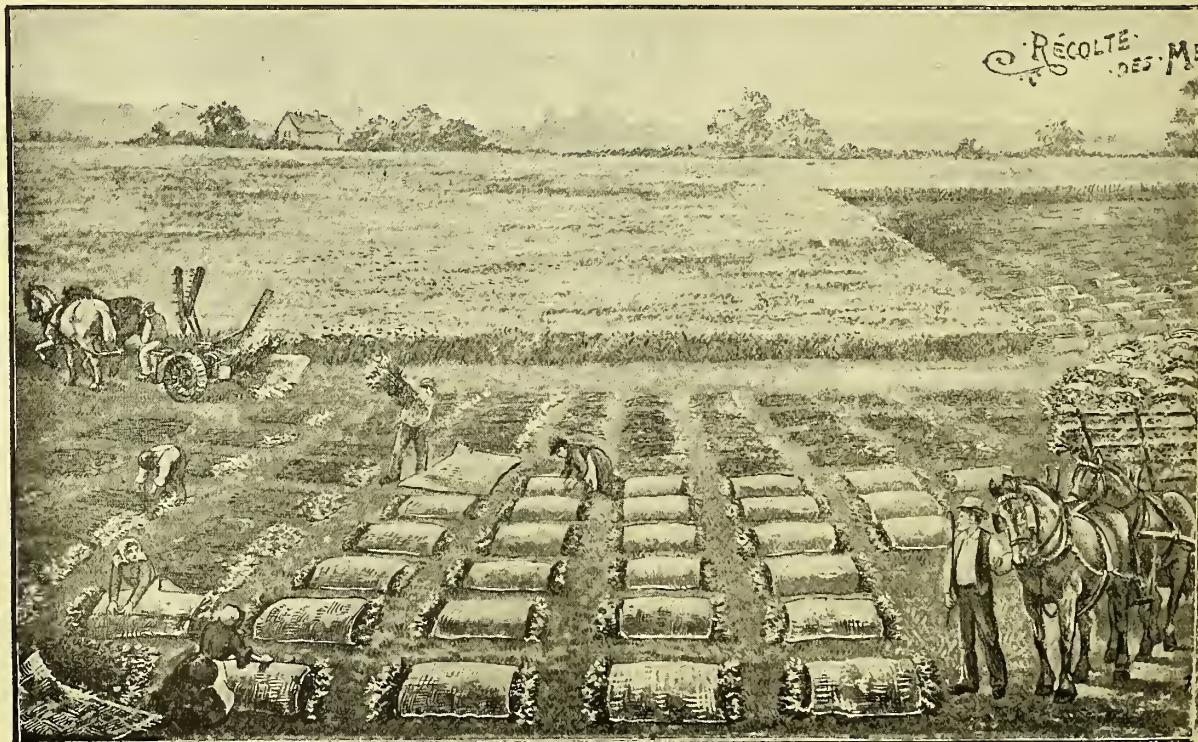
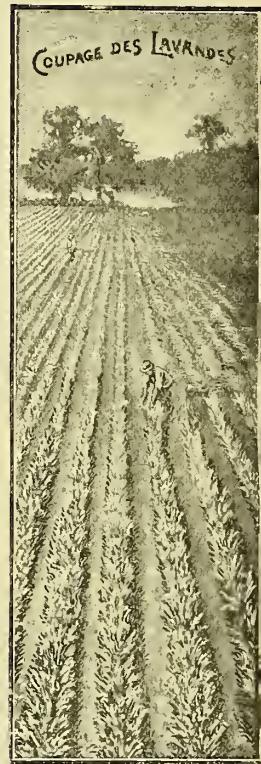
(After Burns: *Apostrophe by the Apprentice*)

O Pharmacy! my dear, my chosen sphere,
For whom my warmest wish to Heaven is sent!
Ne'er may thy pallid sons assembled here
Have such relentless fortune to lament!
And oh! may Heaven endow them with content
Sufficient in amount to make them smile
At an escaping pill; and form a vent
For language which would otherwise be vile.
Thus may the errand-boy continue free from guile!

HORSE-NETTLE is the common American name for *Solanum carolinense*. Dr. C. S. Potts considers it to be a good remedy for epilepsy, given as fluid extract in teaspoonful doses four times daily. See the *Therapeutic Gazette*, page 798, for fuller details.

A Mitcham Essential-oil Plantation

OUR illustrations show the harvesting of peppermint herb and lavender in the Mitcham district. Some of the principal farmers have of late employed machinery in mowing and reaping the mint, which is then packed in mats for transportation to the stills. The peppermint fields, though neither so beautiful a sight nor so fragrant as those where the growing lavender waves its head, are still one of the prettiest sights within a twelve-mile radius of the City, especially when the herb is just ready for harvesting. The nicest to the view are, perhaps, the fields of white mint, with its pale-green foliage and greyish flowers; but such fields are but seldom met with, almost the whole of the mint area being planted with black mint, which yields a larger percentage of oil, and has deep green leaf, while the flowers are barely visible. Botanically, however, the two plants are identical, the "white" mint being merely a deviation of the ordinary *Mentha piperita*. The peppermint is planted in rows, and must be kept carefully weeded. In November, after the harvest (which takes place between the end of July and the beginning of September), the old plants are ploughed in and the new ones covered to keep them from being injured by frost. Our second illustration shows the replanting of the mint. Lavender is cut in the old-fashioned way with the sickle. This season the yield of this much-prized scent has been very small, and the fields have not looked their best; but in a year of abundance a broad lavender field in full bloom, interspersed with occasional poppies, is as glorious a sight as one can wish to behold. The lavender-plants grow about 30 inches high, and are cut off about 6 inches above ground, packed in mats—the harvester always spreads his mat beside him when proceeding to work—the bottom-part of the herb being packed outwards, to protect the flowers, and taken to the still, or to Covent Garden, to retail in bunches. Our illustrations are taken from photographs representing the plantations of Messrs. John Jakson & Co., who have carried on distilling operations in the Mitcham district for many years.



MODERN WAY OF HARVESTING PEPPERMINT.

Scientific Notes.

Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected, and Translated.

ALMEN'S BLOOD-TEST.

IN testing for blood by Almen's test, Professor Charles F. Crowley states (*Drug. Cire.*) that he has always mixed the tincture of guaiac with the blood-solution, superimposed a layer of oil of turpentine, when, on tapping, a greenish-blue zone makes its appearance at the juncture of the turpentine and guaiac layers. The reaction depends entirely on the amount of oxygen stored in the turpentine, and he now suggests the use of peroxide of hydrogen, as it is a cleaner, quicker, and more efficient reagent.

ALDEHYDIC SULPHITES.

THE well-known property which aldehydes possess of combining with acid sulphites to form stable, solid compounds has hitherto had its principal application in the analysis of oils, but it is possible that it may have further application. Fagard has recently made several compounds which may be of medicinal use—viz., benzaldehyde-lithium bisulphite ($C_6H_5O.LiHSO_3$)₂.H₂O, acetone-barium bisulphite (C_3H_6O)₂.Ba(HSO₃)₂.H₂O, and acetone-strontium sulphite of similar constitution to the barium salt. These salts may be made by mixing the basic hydrates and the aldehydes in theoretical proportions in water, and saturating the mixture with sulphurous-acid gas.

LEAD IN OPIUM.

MR. R. THAL has communicated a note to *Phar. Zeit. f. Russ.* regarding a peculiar sample of opium which he has examined. It was picked out of a 700-lb. lot of the drug bought by the Military Medical Department as the best Smyrna opium. Dried at 60° C. the sample lost 16.1 per cent of moisture, and at 105° C. a further 3.8 per cent. The morphine yield from the drug dried at 60° C. was 12.19 per cent. The ash amounted to 5.02 per cent. On rubbing the latter in a mortar it was found to have a metallic appearance in respect to some grains, and this on investigation was seen to be due to the presence of lead, of which the equivalent of 0.4 per cent. metallic lead was separated—i.e., 0.4 per cent. calculated on the opium. The lead appears to have been present as a salt.

GROUND-NUT OIL.

ARACHIS HYPOGEA is cultivated in India, Java, Senegal, Mexico, South America, Algeria, Spain, and other countries for the sake of the nuts, which are well known to be rich in a bland sweet oil, known in commerce chiefly by the name of Pondicherry oil. A. M. Villon has published (*Rev. de Chim. Industr.*) some interesting particulars regarding the production of the oil. The first thing done with the fruit is to remove the shells and pericarps, which is effected by machinery. The shells constitute 22 per cent. by weight of the fruit, the pericarp 7 per cent., and the cotyledons the rest. The composition of the respective parts is represented by the following figures:—

	Skinned nut	Unskinned nut	Shell
Proteids	18.45	19.95	6.58
Nitrogen	2.95	3.19	1.05
Fatty matter	26.45	34.45	—
Ash	3.57	1.87	9.24
Water	32.11	31.10	23.42
Phosphoric acid	0.329	0.384	0.150
Potash	0.370	0.350	0.412

The actual yields of oil are 30 to 32 per cent. from the raw nuts, and 40 to 42 per cent. from the peeled nuts. There are three qualities—"superfine," which is the product of the first pressure in the cold; "fine," being the second pressure; and "huile de fabrique," the third pressure, heat also being used in this. The residue still contains from 18 to 20 per cent. of fatty matter, and makes, therefore, a good cattle-food.

DRIMYS GRANATENSIS PRINCIPLES.

DR. O. HESSE has made the study of so-called coto-barks a speciality, for there is little that we know of them chemically which has not come from him. His last paper is on the bark of *Drimys granatensis*, a tree which grows in Colombia, the bark being imported from Merido as coto-bark. This he finds (*Annalen*, 369) to contain a neutral principle, drimin, $C_{13}H_{14}O_4$, which he has obtained as a crystalline powder, easily soluble in hot alcohol, chloroform, and acetic ether, slightly in cold alcohol, and insoluble in ether, ammonia, soda-solution, and water. But, strange to say, the compound entered into combination when treated with milk of lime. Hesse also obtained indications of the existence of drimys acid, but could not isolate enough for identification. The leaves of the plant yielded drimol, $C_{28}H_{48}O_2$, which is an alcohol crystallising in small white needles, and melting at 73–74° C. From this he prepared the acetyl derivative, $C_{28}H_{50}(C_2H_3O)O_2$, melting at 42–43° C.

VALENTA'S TEST FOR OILS.

By E. J. Parry, B.Sc.

VALENTA'S test for fatty oils is probably well known to most pharmacists. It consists in mixing equal volumes of the oil and glacial acetic acid, heating until the oil is completely dissolved, and noting the temperature at which turbidity occurs, when the mixture is allowed to cool. It is also well known that many observers have obtained very discordant results with this test, amongst whom are Allen, Ellwood, Hurst, Thomson, and Ballantyne, of whom the last four describe the method as unreliable. It is, however, I think, going too far to say that the method is unreliable, as when certain points are taken into consideration extremely valuable indications of the purity or otherwise of an oil are obtained by means of this test. Valenta specified the strength of the glacial acetic acid to be used as that having a specific gravity of 1.0562, meaning, of course, the 99.5-per-cent. acid, for a 44-per-cent. acid also has this specific gravity. But since very minute differences in the strength of the acid cause a very different temperature of solubility to be observed, and very slight differences in the gravity accompany relatively large differences in the strength of the acid, there is nothing to be surprised at in the different results obtained by different observers. It is, in fact, acknowledged that the specific gravity taken with ordinary care is not a reliable indication of the exact strength of the acid. Commercial glacial acetic acid varies much in strength, so that no reliance can be placed on it for this test. The method of comparison I always adopt is to treat every batch of acetic acid as a separate individual, and to keep a sample of oil of known purity and take the temperature of turbidity of this with each batch of acetic acid, and compare the samples to be examined with this in the usual way. To attempt to use a fixed figure, or even one within fairly large limits, for any given oil is perfectly useless. To illustrate these differences, I quote the following figures. On certain batches of acetic acid the following results were obtained for pure samples of colza oil:—

(1)	(2)
Insoluble at boiling-point	91°–92°
118°	92°
118°	93°
118°	94°
120°	
120°	
(3)	
Insoluble at boiling-point	87°–88°
Insoluble at boiling-point	84°
Iosoluble at boiling-point	92°
	90°

The same large variations are observed in cases of other oils. Indeed, the same sample of colza oil will give a result of 85° with one batch of acid, and 118° with another of only very slightly weaker strength. If, however, each sample be examined coincidently with the standard sample of known purity, the temperature will, of course, be in close agreement if the sample examined be pure. In this way Valenta's test is of great utility and value, but to attempt to quote a definite figure for a certain oil is entirely useless and misleading, as by doing this the most ridiculous extremes of difference have been recorded by different observers, with the result that the test has been looked upon by many as possessing no value, which is certainly not in agreement with fact.

See Pages

194 & 195.

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PHARMACY AS A BUSINESS.

THE signs of the times notwithstanding, pharmacy remains, as it always has been, a buying and selling occupation. No one can ignore that fact who handles the present number of THE CHEMIST AND DRUGGIST, the bulk of which consists

of the direct appeals of sellers to buyers. It would be impossible to get together this large mass of trade enterprise were it not for the fact that the firms engaged in the business know by experience that the drug-trade has money to spend, the business instinct to deliberate upon the merits of the wares offered, and the judgment to select what is best for their purpose. The further fact that this issue is a universal one, and, therefore, that it appeals to all sorts and conditions of pharmacists, shows that the nature of pharmacy abroad is much as it is in the United Kingdom—a business of buying and selling.

In making these remarks we do not overlook the probably higher factor in pharmacy, which involves all that is educational, legal, or scientific. This factor has always appealed to us as pharmacists, knowing the skill and knowledge required in the practice of pharmacy; and although THE CHEMIST AND DRUGGIST has never from the outset pretended to be other than a trade journal, it has consistently endeavoured to educate the trade to greater appreciation of abstract and technical matters relating to their calling. But there arrive occasions, as now, when it is useful to remind pharmacists that they are engaged in a buying-and-selling business. Some treat all the efforts to abort the evils of cutting as utterly beneath their consideration, maintaining that pharmacy, as a *quasi*-professional, non-trading body, should be superior to competition and its consequences. Others, probably the same persons, would not have us meddle with early-closing measures, because the pharmacist should always be at the beck and call of the public, like the physician (who, by the way, is not); and they also, to take one further example, deprecate chemists taking out wine-licences, although they do not object to sell medicated wine by the same names as those for which the licence is required. These inconsistencies we believe to be based on perfectly conscientious scruples, but they are perplexing to the less dignified, and it is as well that the latter should be assured that loyalty to the craft, *esprit de corps*, or what not, does not call upon them to worry about ethical attenuities beyond their perception. Enough for them to know pharmacy as well as they possibly can, and to be unceasing in improving their business methods. We hope our observations are not misunderstood, for we quite sympathise with the aspirations of those who think that "pure pharmacy" should be treated professionally and not as a business. But if their views were given effect to, the tail would wag the dog, for the great bulk of pharmacy is of quite another character. The article beginning on page 123, "How to Open a Pharmacy," bears out excellently the last observation; and anyone who glances through the lists of multifarious stock which a chemist and druggist finds it necessary to lay in, wherever he starts business, will agree with us and that the business side of pharmacy needs strict attention. Hence we regard such a number of THE CHEMIST AND DRUGGIST as the present one as a real trade necessity. It will reach the hands of many in all parts of the world who may not get it regularly, and we ask that they, as well as regular subscribers, will make a study of it from cover to cover, with a view of introducing into their businesses those ideas and goods which they at present lack.

trade of that country is still increasing—in the old hackneyed but expressive phrase—"by leaps and bounds." The statistics only cover the first half of the year 1895, but during that time the imports of the Colony, compared with the corresponding six months of 1894, increased by 4,851,630*l.*, and the exports by 2,515,908*l.* This increase in exports has been achieved in spite of great falling off in the value of a few "special articles," such as diamonds, and is solely due to the growth in value of general articles of colonial produce (500,000*l.*) and of gold. The trade-returns for the second half of the year have not yet been published, but that they will show a continued expansion may be inferred from the fact that the Colonial Revenue Returns for the second half of the year exhibit an increase of 655,686*l.* compared with those of the corresponding period of 1894, and are very considerably in excess of the estimate. The steadily increasing importance of Cape Colony as an export-market is shown by the fact, that whereas in 1885 the country imported 4*l.* 6*s.* worth of foreign goods per head of the population, in 1890 it took 6*l.* 4*s.* worth per head, and that the purchases for last year will probably average nearly 8*l.* per head. And almost as great as the value of Cape Colony itself as a market for goods is that of the newly-settled "Hinterland," which, for the present, is most accessible through Cape Colony or Natal, of the Chartered Company's territories, the peacefully prospering Orange Free State, and the Transvaal, now momentarily convulsed by political troubles, but almost certain to make as extraordinary industrial progress during the next generation as she has done in the course of the past five years. Within the last six or seven years the foreign trade of South Africa has taken a more and more easterly direction. Port Elizabeth has outgrown Capetown so far as the turnover of imports and exports is concerned, and the Portuguese port of Delagoa Bay bids fair in the future to rival or even outgrow Port Elizabeth. In the meanwhile, confining ourselves to Cape Colony, it is satisfactory to know that pretty much the whole of the foreign business of that country is with the United Kingdom. In 1890, out of 10 million pounds' worth of imported goods, 8*½* millions came from British ports; while of 10*½* million pounds' worth of exports 9*¾* millions went to Britain. No detailed figures are at present available of the value of druggists' goods sent to Cape Colony last year, but in previous years the amount fully held pace with the general expansion of trade in the colony. We therefore experience a legitimate satisfaction in knowing that, wherever civilisation plants her flag in South Africa THE CHEMIST AND DRUGGIST is found, and that there is probably no trade-journal of any kind and few other British papers which have so wide a circulation between Capetown and the Zambesi. It is officially subscribed for all the members of the South African Pharmaceutical Association, the Pharmaceutical Society of Natal, and we have reason to believe that a similar contract with the recently-formed Pharmaceutical Society of the South African Republic (Transvaal) is on the way. Besides that there are scores of wholesale merchants and pharmacists scattered over South Africa who subscribe to THE CHEMIST AND DRUGGIST on their own account. This, however, does not satisfy us altogether, and, therefore, in order to leave no South African pharmacist and druggist an excuse for being absent from our subscribers' register, and to enhance still further the value of the paper as an advertising medium to those who cater for South African business, we have decided to send during the present year occasional copies of THE CHEMIST AND DRUGGIST to all buyers of drugs and pharmaceutical goods of whom we have the addresses, even though they may not actually be on our books of subscribers.

SOUTH AFRICAN TRADE.

ONE of the most cheerful trade prospects of the present time is afforded by South Africa. According to the official statistics of Cape Colony, published this week, the foreign

PRESCRIPTIONS IN ILLINOIS.

MR. C. S. HALLBERG, professor of pharmacy at the Chicago College of Pharmacy, communicates to the *Western Druggist* a startling analysis of 10,000 prescriptions dispensed in Chicago and the State of Illinois—startling in respect to the frequency with which proprietary preparations were prescribed—viz., 2,613 times in the 10,000 prescriptions. This number is classified as follows:—

1. Antiperiodics, &c.	..	..	..	..	827
2. Antiseptics, solutions, &c.	..	..	..	..	248
3. Hypnotics	..	..	..	..	13
4. Ointment-vehicles	..	..	..	..	252
5. Cod-liver oil preparations	..	..	..	..	28
6. Digestive fermentations:—					
Pancreatin	..	..	..	..	56
Pepsin	..	..	..	..	72
Lactopeptine preparations	..	..	..	..	345
7. Miscellaneous liquid preparations	..	..	..	..	773
Total..	..	..	..	..	2,613

It is curious to note that of the proprietary antiperiodics phenacetin leads with 282, then come salol, 271; anti-kamnia, 257; and antipyrin, 115. In the antiseptic class listerine leads with 115, and aristol is next, 62; iodoform being prescribed but 38 times. The following are the non-proprietary medicines most frequently prescribed:—

—		Hallberg	Martindale	
Quinine sulphate	800	500 (8)
Bismuth subnitrate	465	—
Tr. camph. co.	464	—
Morphine sulphate	400	—
Sodium bicarbonate	355	668 (4)
Calomel	350	—
Syr. tolutan.	345	—
Ammonium chloridate	325	—
Salol	271	—
Tr. aconiti	268	—
Tr. nuc. vomie.	268	226 (2)
Spt. chloroformi	73	931 (1)

The first eleven of these are the highest in the list, and we have added to them Mr. Martindale's figures for 10,000, to show the positions they occupied in his analysis. Eight of the British popular articles have thus only an average consumption in Illinois, and out there they have yet to appreciate the value of chloroform as a flavouring and sweetening agent. Meanwhile liquorice takes its place, being prescribed 250 times. Mr. Hallberg states that though the "consumption of proprietary articles as compared with the non-proprietary is about 25 per cent. in volume, it is probably not less than 50 per cent. in value." English pharmacists will note how largely antifebrile remedies figure in the list—a condition of things entirely due to climatic influences.

THE AMSTERDAM CINCHONA-MARKET.

ANOTHER year has passed without bringing the hoped-for improvement in the Amsterdam cinchona-market. Once or twice there were slight indications of better times in store, but these were almost immediately doomed to disappointment. The alkaloidal richness of the bark shipped from Java during the year still shows a tendency towards increase, the average quinine value of the manufacturing-bark in the January sale having been 4.63 per cent., whereas in the December auction it was 5.34 per cent. The average for the year is 5.01 per cent. against 4.93 per cent. in 1894, 4.60 per cent. in 1893, 4.50 per cent. in 1892, 4.08 per cent. in 1891, 4.00 per cent. in 1890. It will thus be seen that, apart from the actual increase of weight in the bark

sold at the Amsterdam auctions during the year, which was 5,770,493 kilos. in 1895, while in 1890 it only amounted to 3,271,054 kilos., there has been, since 1890, an increase of 20 per cent. in the quinine value of the bark. The combination, or, rather, understanding between the quinine-buyers, which has throughout operated against the interests of the planters (although the latter have been their own worst enemies), has remained intact throughout the year. The sulphate of quinine offered in bark during the year has reached the enormous total of 283,786 kilos., of which 224,364 kilos. were purchased by the representatives of quinine-makers, a proof, if such were needed, that the consumption of the drug has been considerable throughout the year, although there have been no exceptional reasons for any large increase. The fact that the consumption has been great is emphasised by the continued decline of the second-hand supplies of quinine in London, which now only amount to about 123,000 lbs., against 172,000 lbs. a year ago. An interesting table showing the quantities of the various varieties of the cinchona-bark from Java offered in Amsterdam during last year has been compiled by one of our correspondents. We have no room for it in this issue, but may observe that no less than 86 per cent. of the bark consisted of *Ledgeriana*, of which 4,983,798 kilos. was placed on sale. The next variety in importance was that of *Hybrid* barks, of which 560,057 kilos. were put up in auction. *Succirubra* or "Druggists'" barks was represented by 188,149 kilos., *Officinalis* by 36,282, and *Calisaya* (*Schuhkraft*) by only 2,207 kilos. As late as 1889 the last-named variety still furnished 41,280 kilos., while in 1890 the *Succirubra* offered still amounted to 490,231 kilos. The subjoined figures show the quantities of sulphate of quinine in kilos. offered at the Amsterdam auctions during the last seven years:—

1895	1894	1893	1892	1891	1890	1889
283,786	220,527	217,797	168,918	140,143	121,420	77,090

In spite of the dulness which prevailed throughout the year, five-sevenths of the quinine in bark offered was sold straight away, and the bulk was afterwards disposed of privately. As a result of this steady inquiry, the first-hand stock of bark in Amsterdam has been reduced from 24,635 packages at the beginning of 1895 to 16,147 at the end of that year; but there is a not inconsiderable stock in the possession of second-hand holders. The hopeless manner in which Ceylon has been put in the shade by Java as a cinchona-producer is shown by the following figures, representing in kilos. the equivalents of sulphate of quinine in the total shipments from Ceylon and Java during the last four years, the quinine value of the *Ceylon* bark being estimated at the probably slightly exaggerated average of $2\frac{1}{2}$ per cent. :—

—	1895	1894	1893	1892
Java ..	220,693	219,819	168,866	133,253
Ceylon ..	11,175	30,317	40,480	80,922
Total ..	231,868	250,136	209,346	214,175

In other words less than 5 per cent. of the total quantity of quinine supplied to the world by the two islands together is now furnished by Ceylon. In this calculation India has been left out of account; but as the estimates of the world's annual consumption of quinine run from 200,000 to 250,000 kilos. it will be seen that, even making allowance for the Indian and South American supplies, production and consumption appear to be fairly well balanced. Our correspondent, in casting an eye upon the future, takes the rather optimistic view

that the worst has now been passed, that 1895 has been a year of crisis, and that during the present year a general recovery will make itself manifest in the market. He distinctly asserts that there can be no doubt that the heavy shipments from Java have been the result of harvestings forced upon the planters by financial necessities, and that, although a large reserve still exists, yet the weak holders have been pretty well exterminated. The prospects of the two quinine-factories which are now being built in Java, or for which, at any rate, the capital has been promised, are not considered very bright. The principal bark-producers, it is thought, are bound by many ties to the European market, and in the prospective struggle between the financial power of the combined European quinine factories and the powerful interests of brokers and importers in maintaining the Amsterdam cinchona trade, there is scarcely room for doubt that the Java quinine-makers will be vanquished. In the meantime, however, there is still room for improvement in the price of cinchona-bark, for, although the average unit price has shown a slight improvement during the year, it is still only 3c. per half-kilo. The lowest depth was reached in the February sale of last year, when the unit fell to 2½c.

FREE TRADE IN NEW SOUTH WALES.

NEW SOUTH WALES has been the first of our colonies to break wholly and suddenly with the Protectionist policy that has too long hampered the welfare of Australasia. It is true that our leading Australian colony has always been a country of strong Free-trade tendencies; but of late years she has had a bitter taste of the consequences of the high tariff she was led to adopt, partly as a result of the influence of her ultra-Protectionist neighbour Victoria, partly in consequence of impatience at the era of depression which, in spite of Free Trade, had temporarily overlaid N.S. Wales along with the other Australian colonies. As N.S. Wales has long stood pre-eminent as the colony consuming a larger value of foreign goods per head of the population than any other (for which she paid in her agricultural, pastoral, and mineral exports), her return to the path of economic soundness will be received with gladness, not only because it will do us good, but because it will benefit herself still more. And although the mutability of Australian political affairs is proverbial, it will be wise thankfully to take what the Present has to offer instead of speculating upon what may happen in the curtain-hidden Future.

The Bill which Mr. Reid, the N.S.W. Premier, laid before the Legislative Assembly at Sydney on September 10 last, has now become law, and since January 1 of this year N.S.W. is again a Free-trade country, more thoroughly so, in fact, than she has been before. Certain duties continue to operate until July 1 next, but they do not include any pharmaceutical articles. The Act provides that "all contracts made on or before May 9, 1895, for the sale or delivery of any duty-paid imported goods otherwise than in bond, the duty on which is decreased by this Act, shall be subject to a decrease in the contract price of such goods corresponding in rate and amount with the amount of such decrease of duty as aforesaid." As it is just possible that some of our readers may have entered into contracts of this kind for heavy chemicals or other produce, it may be useful to point out that their N.S.W. customers will have the right to deduct the difference between the duty upon which the contract was based and that now prevailing from the bill for the goods. The new tariff of the colony is an extremely simple affair. All goods are free with the exception of alcoholic preparations, tobacco, and opium, which will per-

manently be subject to duties, and some few articles—viz., candles, petroleum, oils, biscuits, confectionery, fruits, jams and jellies, and preserves—on which the duties will gradually be diminished in the course of the next five years, until they are completely freed, which will be the case with the last of them (preserves) on July 1, 1900.

The following is the complete N.S.W. tariff, so far as it concerns pharmaceutical goods:—

A. PERMANENT TARIFF.

	s. d.
Opium, or any preparation thereof (per lb.)	20 0
Sheepwash (from tobacco) (per lb.)	0 3
Spirits—On all kinds of spirits and spirituous compounds imported, and not otherwise enumerated (per proof gall.)	14 0
No allowance beyond 16½ shall be made for the under-proof of any spirit of a less strength than 16½ under-proof.	
Bitters, essences, fluid extracts, sarsaparilla, tinctures, medicines, infusions, and toilet preparations containing—	
Not more than 25 per cent. of proof spirit (per gall.)	3 6
Not more than 50 per cent. of proof spirit (per gall.)	7 0
Not more than 75 per cent. of proof spirit (per gall.)	10 6
If containing more than 75 per cent. of proof spirit (per gall.)	14 0
If containing spirit overproof to be charged as spirituous compounds (per proof gall.)	14 0
Methylated spirit (per gall.)	0 1
Perfumed spirits, perfumed waters, Florida water, and bay rum (per liquid gall.)	20 0

B. DIMINISHING TARIFF.

Oil, kerosene, naphtha, and gasoline (per gall.)	0 6
From July 1, 1896 (per gall.)	0 3
From July 1, 1897	Free
Oils, except linseed oil (raw or boiled), fish and seal oils, black whale, cocoanut, sperm, palm, and essential oils (per gall.)	0 6
From July 1, 1896 (per gall.)	0 3
From July 1, 1897	Free
Confectionery (including cakes, comfits, liquorice, liquorice paste, lozenges of all kinds, cocoanut in sugar, sugar-candy, sundaes and sweetmeats) (per lb.)	0 2
From July 1, 1898 (per lb.)	0 1
From July 1, 1900	Free
Jams and jellies, per lb., or reputed packages of that weight, and so in proportion for any such reputed weight (per lb.)	0 1
From July 1, 1898 (per lb.)	0 0½
From July 1, 1900	Free

The permanent duties referred to above are the same as those of the old tariff, but the great untrammeled of trade which has been effected can be seen from the fact that the duties swept away altogether include charges of 1s. 3d. per dozen quarts on fruit-essences, cordials, lime-juice, &c., and oils (not essential) in bottles, 60s. per ton on paints and colours ground in oil, 30s. per ton on dry colours, 2s. per gallon on alcoholic and 1s. per gallon on other varnishes, 6d. per gallon on vinegar, 2s. 6d. per gallon on acetic acid, 2s. 6d. per cwt. on sulphuric acid, 6d. per dozen on mineral and aerated waters, 1s. per dozen on oilmen's stores in bottle, 15s. per cwt. on "advertising matter," 2d. per lb. on fancy and 3s. per cwt. on other soap, and 1d. per lb. on prepared farinaceous foods, gelatine, honey, and wax. As the 1½ million of N.S. Welshmen import about 24,000,000l. worth of foreign goods a year, of which one-half comes from other Australian colonies, and nearly all the rest from the Mother Country, this welcome opening of increased business should promptly be taken advantage of by our merchants. When will Victoria follow suit?

THE ONE-MAN COMPANY.

The affairs of A. Salomon & Co. (Limited), the company whose "debentures" Mr. Justice Vaughan Williams last

year refused to recognise in preference to creditors, came before the same judge again on January 17. It was held by Mr. Justice Vaughan Williams, and his judgment was maintained in the Court of Appeal, that the defendant in the case before him could not evade his liabilities to creditors by the process of converting his business into a limited company, such company being merely his nominee, and giving himself or some other person a preferential claim to the assets by means of debentures. In giving judgment the other day on an application which was only a variation of the former one, his Lordship said that all the shareholders were mere nominees of Mr. Salomon, and that the pretence of carrying on the business in the name of the company was merely a sham, and that those persons who in name were creditors of the company were in reality creditors of Salomon. The circumstances were such that a creditor of the company could have successfully sued Salomon. That being so, it seemed to his Lordship that Salomon could enforce no claim on the assets of the company until the company had been relieved from all its liabilities incurred by the carrying on of a business which beneficially was Salomon's, the whole scheme being a mere device to prevent the business being Salomon's, onerously as well as beneficially. The first case is to be carried to the House of Lords. If the judgment of the lower Courts should be maintained there, it appears to us that it will be quite good enough to justify the Pharmaceutical Society in seeking to establish the legal liability to the Pharmacy Act of one of the "one-man" companies who now evade the Act. The argument against them is exactly that stated by Mr. Justice Vaughan Williams. They have adopted "a mere device to prevent the business being theirs onerously as well as beneficially."

CREAM MILK.

This is the name which Dr. Edward Cautley gives to a new milk for feeding infants. He suggested it to the Aylesbury Dairy Company as an approximate representation of mother's milk, and it is made by mixing with a 10-per-cent. aqueous solution of milk-sugar its own volume of fresh cow's milk, and passing the mixture through a separator, so that milk and watery solution will come away at practically the same rates. We take the following analytical contrast from the *Lancet*:

	Cream Milk.	Human Milk.
	Per cent.	Per cent.
Total solids	13.11	13.20
Proteids	1.82	2.00
Fats	4.02	4.00
Lactose	6.88	7.00
Ash	0.33	0.20

Cream milk is filled into airtight pint bottles and Pasteurised. Dr. Cautley considers this milk an ideal food for infants, because it does not disagree with the stomach, and never forms the lumpy curd which is the chief objection to cow's milk in any condition. But cream milk has one objection—it costs 6d. a pint, and, as an average child will consume $1\frac{1}{2}$ pint a day, it is out of the reach of the majority of people who have babies to bring up.

AS OTHERS SEE US.

Mr. Otto Hoffmann some time ago wrote a series of articles for the *Pharmaceutische Zeitung* on "Pharmacists in the Armies and Navies of the Leading European States." The American Pharmaceutical Association is having them translated, and the *American Druggist* publishes them. From the last article we cut this delicious paragraph:—

In England no special education for pharmacy is required by law. A young man becomes an apprentice, generally for three years, without being asked how long, if at all, he has

been at school. During this time, or only after a long period of cleyking, he passes a preliminary examination, for which some knowledge of English grammar, arithmetic, and Latin is required. Very little knowledge is necessary for passing this examination. Some who take the examination do not trouble themselves about Latin grammar, but content themselves with learning a few chapters of *Cæsar* by heart. Passing the examination entitles the candidate to call himself a "student of the Society."

No wonder some amongst us almost weep for a more stringent Preliminary examination. Probably they vex their souls with the thought that "no special education is required of them by law" and the Germans know it. Seriously, we have only known of one man who attempted to get through the Preliminary on the strength of his knowledge of *Cæsar*, which happened to be the first forty chapters. He got passages from the forty-fifth, and had to try again.

THE JAPANESE TRADE : CONSULAR WARNING.

"Drugs and medicines," as every chemical-merchant knows, form one of the chief classes of foreign goods imported into Japan. The value in British currency of these imports in the course of the last six years is thus expressed:—

Year ..	1889	1890	1891	1892	1893	1894
Value .. £296,603	331,203	379,931	333,760	446,431	393,343	

With such a steadily enlarging field before them, European manufacturers naturally endeavour to make the most of the opportunity, and may show themselves unwisely eager to enter into direct business-connections with native buyers. Against such a course, unless pursued with great caution, Vice-Consul Longford, of Tokio, utters a timely warning. "Efforts," he writes,

are already being made to induce British manufacturers to enter into direct relations with Japanese consumers, and roseate prospects held out to them of the great advantages that will accrue when, under the new treaties, foreign trade is entirely freed from restrictions. Few of those who, by long commercial experience in Japan, are best qualified to judge, while looking confidently forward to an increase of trade, think that any part of it will be caused by the abolition of the present restrictions.

But no hesitation whatsoever used to be felt in expressing the opinion that British manufacturers will be very ill-advised indeed if, at least for many years to come, they make any wide departure from the present course of business and strike out new fields for themselves. Several brilliant exceptions of great Japanese firms whose credit is not open to question could be named by anyone knowing Japan. But, generally speaking, it must be admitted that Japanese commercial credit and probity are low, while procedure in their courts of law is slow and uncertain. On the other hand, there are at all the open ports, and especially at Yokohama and Hiogo, British firms of the highest standing, who know exactly to whom among the buyers credit may be given, and whose business in most cases is conducted as economically as that of any native firm. It is through these firms that the British import trade to Japan has been already brought to its present standing, and if it is to continue to develop as it has done, their agency can no more be disregarded in the immediate future than it has been in the past.

These words deserve the greatest consideration. A great trade-paper is, of course, read by a number of native consumers, as well as by the European import-merchants in Japan, and in this respect it fulfils the double function of making native consumers acquainted with the new goods advertised in it, and of keeping the European middlemen informed of the sources of supply.

He was a swell and wanted Eao's salt for 1s. 7d., which he said was what he paid for it. I offered to buy a dozen from him at 1s. 10d. per bottle. He concluded by buying at my price.

ARGON IN THE BREATH.—From experiments made by Kellas it appears that exhaled air contains a relatively larger proportion of argon than before inhalation, and he concludes that it plays no important part in the animal economy. The fact has been reported to the Royal Society.

London Medical Specialists.

WE are often asked to indicate the best London physician or surgeon for this or that complaint or infirmity. It is, of course, most improper to recognise specialists in medicine. Theoretically, they do not exist in the medical ranks; in actual fact the profession is riddled with them. Any attempt to make a selection must necessarily be imperfect. In the first place one is almost compelled to omit from the list the best men of all: the all-round medical consultants who are perhaps the most trustworthy authorities in all but very special cases. On the other hand it is not possible in a short article to enumerate any but the reigning favourites of the hour. It must always be remembered, however, that there are besides these a number of more recently-trained men who are forging their way to the front. It may often happen that one of these younger men is preferable to the one with the famous name whose reputation has been acquired.

Nominally, of course, the choice of the consultant rests with the patient or his friends, but, in reality, it is usually decided by the family doctor, who is certain to exhibit a preference for this or that physician or surgeon, whose claim on his esteem is often that he belongs to the medical school where the practitioner cut his medical teeth, and that he does not venture to contradict his diagnoses unless absolutely constrained thereto, and then only in deferential and almost apologetic terms. In the absence of such guidance the choice is likely to fall on one or other of the consultants with whose names the public have become familiar by having come across them so often in the daily press as attendants on some notability or as the author of some therapeutic fad which happens to be the fashion of the moment, these being some of the myriad forms of ethical self-advertisement so admirably understood and so methodically practised by the foremost members of a profession in which self-advertisement is sternly forbidden.

These circumstances lead to a handful of men getting a quasi-monopoly of consulting-work to the detriment of the patient, whose case it is impossible for them to do justice to in the brief space of time at their disposal, and to the neglect of many experienced and highly-skilled men, whose scientific status is better known within than without medical circles.

The readiest means of gathering the opinion of the medical profession itself as to the special qualifications and acquirements of its own members is by an examination of the hospital appointments, a full list of which, as far as the metropolis is concerned, is given in THE CHEMISTS' AND DRUGGISTS' DIARY. The undoubted advantages of a position on a hospital staff, from a professional point of view, are so universally recognised that a number of hospitals—special ones particularly—have been established for the express purpose of providing for advertising facilities of this kind. It becomes necessary, therefore, to read the names on the hospital staffs with intelligence.

MEDICAL CASES.

General Consultants.—It very often happens that the sufferer simply feels ill, he is acutely conscious that something in his organism has "got out of gear;" but though he is able to describe his sensations readily enough and to spare, neither he nor his medical advisers can refer the mischief to any particular organ or set of organs. The object of a consultation in such a case is to ascertain, as far as may be, the exact source of the trouble, and for this purpose the sufferer must requisition the services of a good

general physician, one who is accustomed to consider and treat the body as a whole—one who looks the patient squarely in the face and does not begin by peering into his recesses through a slit in a mirror, or a highly-polished tube of some sort; one, in fact, who begins his examination at the tip of the tongue, and palpates, pinches, punches, and inspects every inch of territory down to the joint of the big toe, winding up (in exceptionally favourable cases) by triumphantly hitting the metaphorical nail on the head with a competent "Eureka."

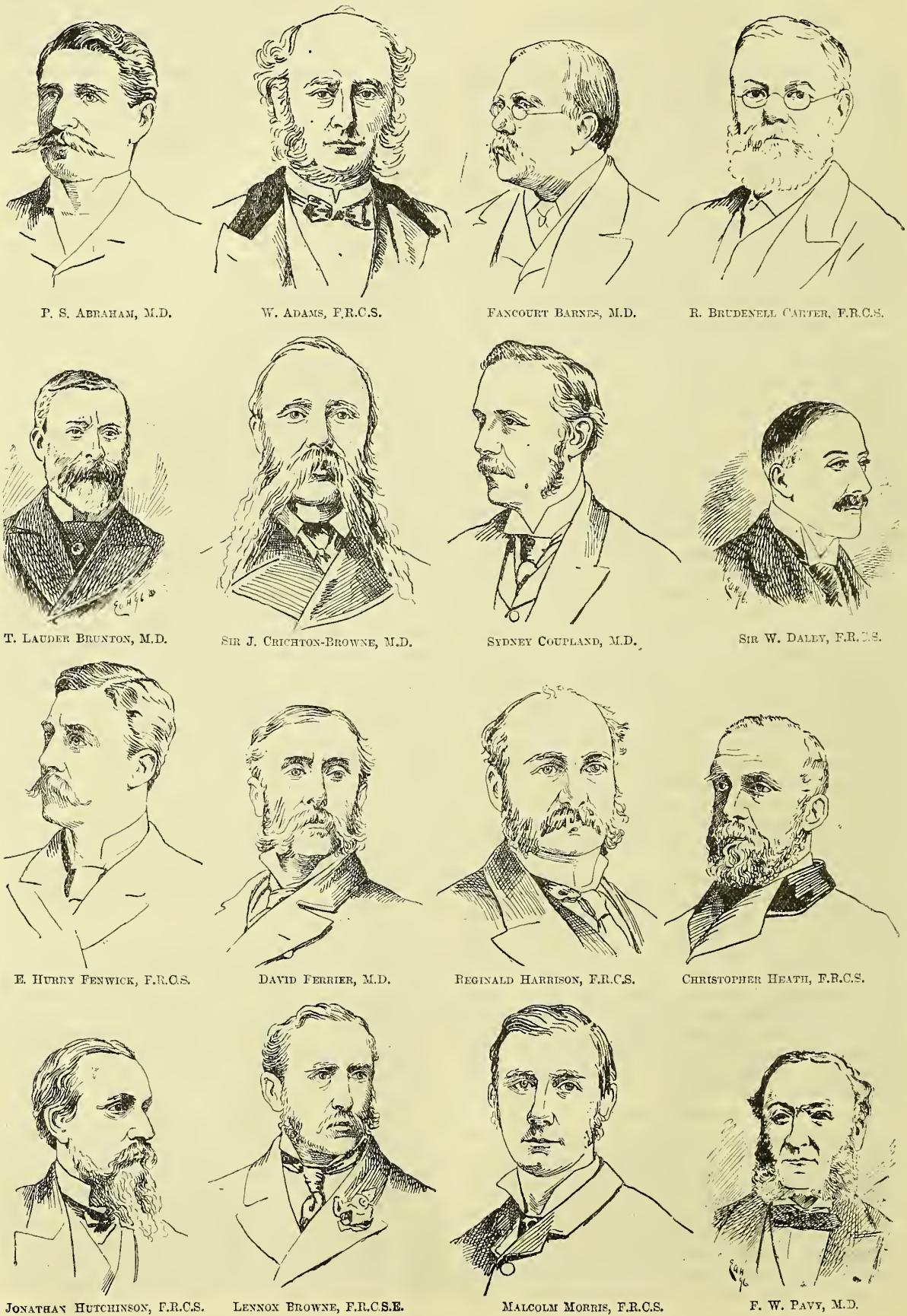
To make a selection of "good all-round physicians" is a somewhat invidious task, because they—or those who claim to be such—constitute the body of the profession, in fact, in most instances, it is from the general physician that the patient learns the *special* nature of his case.

It is perhaps supererogatory to indicate the names of Sir Richard Quain (67 Harley Street, W.), Sir William Broadbent (84 Brook Street, W.), Sir J. Russell Reynolds (38 Grosvenor Street, W.), and Sir B. W. Richardson (25 Manchester Square, W.), seeing that they are in everybody's mouth. Among the untitled men who have nevertheless established for themselves an uncontested pre-eminence may be mentioned Dr. Lauder Brunton (10 Stratford Place, W.), Dr. Wilks (72 Grosvenor Street, W.), Dr. Sydney Riinger (15 Cavendish Place, W.), Dr. Stephen Mackenzie (18 Cavendish Square, W.), Dr. Fredk. Roberts (102 Harley Street, W.), Dr. Ord (37 Upper Brook Street, W.), and Dr. de Havilland Hall (47 Wimpole Street, W.).

The first great division of cases roughly described as "medical"—i.e., appertaining to the domain of the physician as distinguished from the surgeon—comprises diseases of the chest, including diseases of the lungs and heart. Affections of the lungs are so common that the number of physicians who particularly treat them is considerable. Amongst them must be mentioned Dr. Theodore Williams (2 Upper Brook Street, W.), who, having inherited from a distinguished father a reputation for special experience in this direction, has sedulously maintained the honour of the name, and is justly regarded as a "lung specialist" *par excellence*. Dr. Sidney Coupland (16 Queen Anne Street, W.) is well known by his work in connection with acute affections of the lungs, especially pneumonia; and Dr. Murrell (17 Welbeck Street, W.) is a recognised authority on the treatment of diseases of the bronchitis class. Another shining light is Dr. Douglas Powell (62 Wimpole Street, W.), whose works on diseases of the lungs are too numerous even to enumerate. Dr. Symes Thompson, too (33 Cavendish Square, W.), is known to possess a large practical experience of diseases affecting the respiratory organs.

In diseases of the heart one naturally turns to Dr. Saund (84 Harley Street, W.), who for upwards of a quarter of a century has enriched medical literature with valuable data, both physiological and clinical, concerning the organs of circulation. In discussing the therapeutics of ergotia pectoris, the name of Dr. Murrell again suggests itself as having been associated with the introduction of nitrite of amyl and nitroglycerine for the relief of this formidable manifestation of "heart spasm."

Affections of the stomach and intestines are, perhaps, more frequently met with in children, and when the patient is an infant the consultant should be chosen from among those who devote special attention to infantile complaints (see below). In adults the first name that suggests itself is that of Dr. Lauder Brunton (10 Stratford Place, W.), whose works on digestion and its disorders are universally read and appreciated. Sir William Roberts (8 Manchester Square, W.) is also a well-known authority on digestive disturbances, especially those of a gouty origin, and he has been largely



instrumental in popularising the use of partially digested foods, such as Benger's.

Dr. Harley (25 Harley Street, W.) has long made a special study of the liver, which, indeed, is almost a fad with him. He probably knows as much about the aberrations of that much-abused organ as any living man.

Affections of the kidneys stand apart as one of the most important departments of medical practice, failure of the renal function being one of the commonest indications of an impending breakdown in busy city men addicted to the abuse of food and drink and subject to periods of great anxiety and mental strain. Foremost among the "kidney men" is Sir William Roberts, whose works on the chemistry of the urine are standard books of reference. Dr. Pavys

Mental affections may be taken as a sub-division of nervous diseases, and under this head the names of Dr. Blandford (48 Wimpole Street, W.), Dr. Savage (3 Henrietta Street, W.), and Dr. Sutherland (Richmond Terrace, Whitehall, S.W.) should be quoted as well-known authorities.

Children's ailments form quite a separate group, for not only are their diseases largely influenced by their youth, but familiarity with their little ways is necessary in order to obtain the measure of passivity indispensable to diagnosis and treatment. One naturally looks to the staff of the various hospitals for sick children for adepts in this department of practice, and the list affords ample choice. Dr. Barlow (10 Wimpole Street, W.) is an acknowledged authority, *primus inter pares*, and with him we may mention



SIR R. QUAIN, B.A., M.D.



SIR J. R. REYNOLDS, B.A., M.D.



SIR W. ROBERTS, M.D.



FELIX SEMON, F.R.C.P.



FREDERICK TREVES, F.R.C.S.



J. BURNAY YEO, M.D.

(35 Grosvenor Street) is also a "urinary specialist," though his name is best known in connection with sugary urine *qua* diabetes. As kidney-disease is a common complication or *sequela* of "gout in the blood," physicians who make a special feature of gouty therapeutics are necessarily familiar with diseases affecting that organ. Consequently, Dr. Garrod (9 Chandos Street, W.), Dr. Mortimer Granville (14 Hanover Square, W.), and Dr. Dickinson (9 Chesterfield Street, Mayfair, W.) may be considered to possess special aptitudes in this direction.

Specialists in affections of the nervous system are extremely numerous, but there is no difficulty in selecting as prominent in this group the names of Dr. Gowers (55 Queen Anne Street, W.), Dr. Bastian (3A Manchester Square, W.), Dr. Beevor (33 Harley Street, W.), Dr. Ferrier (34 Cavendish Square, W.), Dr. Hughlings Jackson (Manchester Square), and Dr. G. Ogilvie (22 Welbeck Square, W.).

Dr. S. West (15 Wimpole Street, W.), Dr. Cheadle (19 Portman Street, W.), Dr. Eustace Smith (15 Queen Anne Street), and Dr. Dawson Williams (101 Harley Street, W.).

Under this head it may be convenient to specify a few of the surgeons who make, more or less, a speciality of "infantile surgery," including deformities. Mr. Edmund Owen (64 Great Cumberland Place, W.), has done valuable work in this department, and the same remark applies to Mr. T. Smith (5 Stratford Place, W.), Mr. John Morgan (68 Grosvenor Street, W.), Mr. Lockwood (19 Upper Berkeley Street, W.), and Mr. Keetley (56 Grosvenor Street, W.).

SURGICAL CASES.

The abdomen contains so many important organs that the surgery of that cavity necessarily occupies a prominent place in the surgical art. Since the virtual retirement of Sir Spencer Wells, Mr. Knowsley Thornton (49 Montague

Square, W.) holds the field, but there are plenty of others who emulate his feats, notably Mr. Alban Doran (9 Granville Place, W.), Mr. Bowreman Jessett (1 Buckingham Palace Mansions), Dr. Granville (10 Granville Place, W.), Mr. H. Allingham (25 Grosvenor Street, W.). Unique among lady doctors Dr. Mary Scharlieb (149 Harley Street, W.) holds a prominent position as an operator in surgical affections of the female reproductive organs.

Diseases of the genito-urinary apparatus, including the kidney, bladder, urethra, &c., not unfrequently call for surgical treatment. First on the list stands Mr. Henry Morris (8 Cavendish Square, W.). Mr. Hurry Fenwick (14 Savile Row, W.) has achieved fame as an expert in the use of the instruments by which a view can be obtained of the interior of the bladder and urethra. The assistance thus obtained is necessarily of great importance in deciding upon and carrying out the treatment. With him, and on terms of perfect equality, must be mentioned Mr. Buckston Browne (80 Wimpole Street, W.) and Mr. Boyce Barrow (37 Wimpole Street, W.).

Venereal affections are, of course, treated by all surgeons indifferently, but the names best known in connection therewith are those of Mr. Jonathan Hutchinson (15 Cavendish Square, W.), of world-wide reputation on all matters associated with or dependent upon syphilis, Dr. Heron (55 Harley Street, W.), Mr. Stonham (4 Harley Street, W.), and Mr. Astley Bloxam (75 Grosvenor Street, W.); while the City, with its teeming population of incontinent young men, seek consolation at the hands of Mr. Shillitoe (2 Frederick Place, Old Jewry, E. C.).

Diseases of the rectum, such as piles, fistula, and the like, are specially affected by Mr. Swinford Edwards (55 Harley Street, W.), Mr. Allingham (25 Grosvenor Street, W.), Mr. Alfred Cooper (9 Henrietta Street, W.), and Mr. Goodsall (17 Devonshire Place, W.).

Midwifery and Diseases of Women.—The "leaders" are undoubtedly Sir John Williams (63 Brook Street, W.) and Dr. Champneys (42 Upper Brook Street, W.), but equally reliable, and possibly less expensive, assistance may be confidently sought at the hands of Dr. Potter (20 George Street, W.), Dr. Fenton (27 George Street, Hanover Square, W.), Dr. Griffith (114 Harley Street, W.), and Dr. John Phillips (71 Grosvenor Street, W.).

SPECIAL CASES.

Diseases of the Skin.—There is no lack of reliable specialists in respect of diseases affecting the integument. We can, however, only mention a few of the best known, among whom are Mr. Malcolm Morris (8 Harley Street, W.), Dr. Radcliffe Crocker (121 Harley Street, W.), Dr. P. S. Abramson (2 Henrietta Street, Cavendish Square, W.), and Dr. T. Colcott Fox (14 Harley Street, W.).

Throat diseases.—Among the laryngologists, as they call themselves, Dr. Felix Semon (39 Wimpole Street, W.), though a German, has probably the largest practice, but he is closely run by Mr. Butlin, whose contributions to the surgery of the throat are numerous and valuable, and by Mr. Lennox Browne (15 Mansfield Street, W.), whose treatise is a standard work of reference. We may also mention Dr. de Havilland Hall (47 Wimpole Street, W.) and Dr. Ayres (47A Welbeck Street, W.).

Eye diseases.—The inheritor of a great name in the treatment of affections of the eye, Mr. Critchett (21 Harley Street, W.) enjoys a lion's share of ophthalmic practice, but he shares the public favour with Mr. Nettleship (5 Wimpole Street, W.), Mr. Tweedy (100 Harley Street, W.), Mr. Juler (23 Cavendish Square, W.), and Dr. Brailey (11 Old Burlington Street, W.).

Ear-diseases.—Many throat-doctors include the ear in their speciality, but among those whose names are known

more particularly in this connection are Sir Wm. Dalby (18 Savile Row, W.), Mr. Field (34 Wimpole Street, W.), and Mr. Urban Pritchard (26 Wimpole Street, W.).

We do not, of course, pretend that this summary contains the names of all the eminencies in each department, but this was obviously out of the question. It is sufficient for our purpose to have selected only such as can be confidently mentioned as possessing a high degree of skill and reputation in their respective branches. We have to acknowledge our indebtedness to the excellent portrait-gallery of the *Provincial Medical Journal*, from which we have copied most of the likenesses; and we have also referred to *Clinical Sketches* for some others.

Reviews and Literary Notes.

DR M. BOGOLYUBOFF, of Moscow, has recently published an excellent work on new remedies under the title (in Russian) *New Medical Cures which first Came into Use during 1893 and 1894*.

W. ENGELMANN, of Leipzig, will shortly publish the collected papers of Prof. W. Roux upon the "Entwickelungsmechanik der Organismen" ("The Mechanics of the Development of Organisms"). The work will consist of two volumes, illustrated with lithographic plates and blocks.

MR. WILLIAM ANDREWS, of Hull, author of several "volumes of forgotten lore," is the author of a book with the title of *The Doctors in History, Literature, Folk Lore, &c.* The book deals with such subjects as "Magic and Medicine," "Barber-surgeons," "Chaucer's Doc'tor of Physics," "The Doctors Shakespeare Knew," "Body-snatchers," "Medical Folk Lore," &c., and is illustrated.

THE Agent-General for New Zealand in London has recently received a folio volume of Kirk's representations of the flora of the Colony, an authoritative work on that subject. In Kirk's monumental volume, however, none of the engravings are coloured; but a Miss Burton, of Nelson, N.Z., has coloured all the plates in the Agent-General's volume after nature, thereby greatly increasing the scientific value of the work.

ACCORDING to the Publishers' Circular, 5,300 new books and 1,185 new editions of books were published in the United Kingdom in 1895. This is an aggregate increase of sixty-nine upon that of 1894. Most people will be astonished to hear that there has been a diminution in the number of novels published, and there has really been a shocking decline in that department of light reading known as Publications on Law, Jurisprudence, &c. The number of new books on "medicine, surgery, &c." (which includes pharmacy) published in 1895 was 153, while 53 new editions dealing with the same branch of knowledge appeared. In 1894 there were issued only 97 new books and 59 new editions of this class. While for general literature the chief publishing season is October and November, the chief publishing months for medical and surgical works are March and May.

OUIDA's admirers will hardly thank her for her appropriation for literary purposes of the toxic virus as a new weapon in the armoury of jealous love. In her short story *Taïn*, published by T. Fisher Unwin (1s. 6d.), she makes powerful, but gruesome, use of the more recent developments of medical science. The scenes and characters of the story are, however, so far removed from the ken of the majority of readers that the sympathy excited is not likely to be of a very keen character. The Countess Zaranegro and the Prince Adrianis are the principals in a love-story which develops itself in Venice. They are rather colourless characters, however, the interest of the story, such as it is, centering in Dr. Frederick Damer, a cold-blooded English physician, who is accompanying the Prince on his travels, and who becomes his rival for the hand of the Countess. He is a man who has allowed the pursuit of science to crush out all feelings of humanity, and consequently when the Prince contracts diphtheria, and under

the care of the wicked doctor is recovering, the latter injects the deadly virus itself instead of its attenuated product, and, soon after the death of his victim, marries the Countess.

Ham's Inland Revenue Year-book, 1896. A Book of General Reference and of special information on the Revenue and Licensing Laws, income tax and death-duties, &c. Prepared from official records, and published by special permission of the Hon. Commissioners of Inland Revenue. Edited by E. Grant Hooper, and others. 8vo. Cloth. Pp. 376, 68, and 147. 4s. 6d. Effingham Wilson.

THIS old-established semi-official publication will be found useful to all business men whose calling brings them into special contact with the Commissioners of Inland Revenue, and probably by none more than chemical manufacturers and wholesale druggists. In the present issue several of the important chapters have been amplified, and the tincture section has been entirely re-written; the latter course having been found necessary in consequence of the various new orders which have been issued since the last issue of the Year-book. A supplement to the book contains a list of all the special orders issued by the Inland Revenue authorities since November 1, 1894 and the book itself has been revised up to November 1, 1895.

A Treatise on Pharmacy. By CHARLES CASPARI, Jr., Ph.G. Cloth 84 50 8vo, 630 pp. and 288 illustrations. Philadelphia, 1895: Lea Brothers & Co.

THE author of this work has conceived it to be possible to provide students and pharmacists with a work on American pharmacy without incorporating with it the United States Pharmacopœia, which has had a rather poor chance of becoming popular owing to the numerous dispensaries which incorporate it and have been preferred by American pharmacists. The book is divided into three parts—(I.) General pharmacy, (II.) Galenical pharmacy, (III.) Pharmaceutical chemistry—and these are sub-divided into sixty-one chapters. With the exception of the principal division there is little of novelty in the arrangement of the volume, and the first impression that one gets in reading the chapters is that there is little novel in what the author has to say. But this fancy soon disappears, and when the author gets rid of such preliminary considerations as "Pharmacopœia," "weights and measures," and "specific gravity," one begins to feel that Professor Caspary has a grip of his subject and an intelligent knowledge of the practice of pharmacy that command respect. He also writes excellent English, and that goes for something in a book intended for students of pharmacy. We, as British reviewers, have to consider the work from the British pharmacists' point of view—Is it a book of which he, as a student or business man, can make use? and we have no hesitation in replying in the affirmative. Several characteristics are the basis of this opinion. First, the book is an excellent commentary upon pharmaceutical processes, and although this is chiefly applicable to U.S.P. preparations, it is of general application. The commentary consists chiefly of critical remarks upon the preparation of drugs in order to fit them for administration. Instead of regarding official galenicals and prescription-preparations as subjects for separate treatment they are taken together, and this method greatly adds to the value of the teaching, for the student can see how exceedingly representative official medication is. Here and there the commentary is critical, and these observations are instructive to older pharmacists. The strongest feature of the book is the illustrations: some of the engravings are stock ones, but there is a large number of new figures. Those on suppository-apparatus devoted to the production of the "Wellcome" shape are new to us, and involve methods which deserve to be better known. We are also pleased to note several half-tone engravings of apparatus used in Sharp & Dohme's laboratories, which are amongst the best equipped in the United States. Considering that Professor Caspary is a retail pharmacist who spends most of his time behind the counter, it is greatly to his credit that he has produced a book with so little in it deserving of adverse criticism, and its thoroughly practical character bespeaks for it a favourable reception.

More about Argon.

WE have used the title before, and would not use it again were it not that it is the title which Lord Rayleigh gave to the lecture delivered before the Royal Institution last Friday evening. This was the first of the Friday evening lectures, and the attendance was all that could be desired from the lecturer's point of view—that is to say, the lecture-theatre was packed to the ceiling. But it would have been possible to squeeze in a few dozen more. Promptly at 8.55 Sir Frederick Abel, the Chairman of the evening, came in with a lady, and Sir James Crichton Browne with another, and they and members of the Council had scarcely taken their seats when Lord Rayleigh stepped up to the historic lecture-table. He proceeded to business as soon as the applause had subsided.

THE DENSITY OF ARGON

was his first topic. When he lectured on argon in the spring of 1895 he had only taken the density of argon prepared by the magnesium method—*i.e.*, Ramsay's—in which air first has its oxygen extracted with copper, and the residue is passed over magnesium, which absorbs nitrogen and becomes magnesium nitride. What gas remains is then brought under the influence of the electric discharge in presence of oxygen and solution of soda until it ceases to lose volume or increase in weight. The residue so obtained is argon, and it was the density of this that Lord Rayleigh had determined. He wanted to compare with this argon made by the Cavendish method, as it is interesting to know whether they are the same, for we are yet unaware whether argon is a mixture or not. The preparation of the gas either way is a slow process, for it constitutes no more than 1 per cent. of the atmospheric nitrogen, and in order to get 3 litres of the gas for a large weighing, as the absorption of nitrogen by the Cavendish method goes on at the rate of 7 litres per hour, it takes about three weeks to get 3 litres of argon. As a matter of fact, it took Lord Rayleigh about that time to reduce 800 litres of air to 10 litres of mixture, and at that stage he took the stuff down to his country house, Terling Place, to complete the experiment.

The apparatus used for preparing the argon is one suggested by Professor Ramsay, and was exhibited in operation. It consists of (a) a 6-litre globular flask fitted with perforated stopper, through which pass (b) a tube connected with an aspirator, (c) two glass tubes carrying the terminals from an electric converter capable of giving a voltage of 3,000 from the public supply, (d) a glass tube for a fountain of soda-solution forced up into the flask by means of an electrically driven pump. [In the sketch this apparatus is indicated by A.] The object of the fountain arrangement is to expose a continuously fresh surface of soda-solution for the rapid absorption of the nitrous fumes formed by the blazing alternating-current arc in the flask, and in spite of the intense heat of the arc and the large flame of combustion the glass flask is neither cracked nor fused, because the soda-solution keeps it cool. Another curious point to which Lord Rayleigh called attention was that in spite of the presence of soda in the flask there is not the least trace of sodium in the flame. Working with the 10 litres of gas he gradually got it down by May 22, when a preliminary weighing showed that it balanced the scale at 3,2710; but an accident happened, and on June 4 it had got back to 3,2617, and on the 7th it rose to 3,2727—again an accident, for on June 13 it was 3,2652, on the 18th 3,2750, 23rd 3,2748, and on July 2 3,741. This seemed final, and when compared with oxygen = 16 the argon was found to have an atomic weight of 19.940, which is practically the same as Ramsay's 19.941 by the magnesium method. Lord Rayleigh thought these results confirm the belief that argon is not a mixture, because it is hardly possible to suppose that an identical mixture could be prepared in two such widely different ways. It also seems to dispose of the idea that argon is an allotropic modification of nitrogen. Such an allotrope would have the symbol N₃, with an atomic weight of 21, a figure that is too far off the ascertained weight of argon. He next exhibited a new method of preparing argon suggested by a French colleague—namely by absorption of the nitrogen by means of metallic calcium, obtained by heating

together powdered magnesium and quicklime. The process is remarkably rapid. Lord Rayleigh next spoke of

THE REFRACTIVITY OF ARGON

which he has determined to be 0.961 as compared with air 1.000, and helium is 0.146. From the fact that the refractivities of air and argon are so nearly alike it may again be inferred that argon is not an allotropic form of nitrogen represented by N_3 , ordinary nitrogen being N_2 . Dr. Gladstone thinks the figures indicate a diatomic rather than a monatomic structure, but is not very sure about it. The refractivity of helium is remarkable in being much less than that of hydrogen, which is about half that of air.

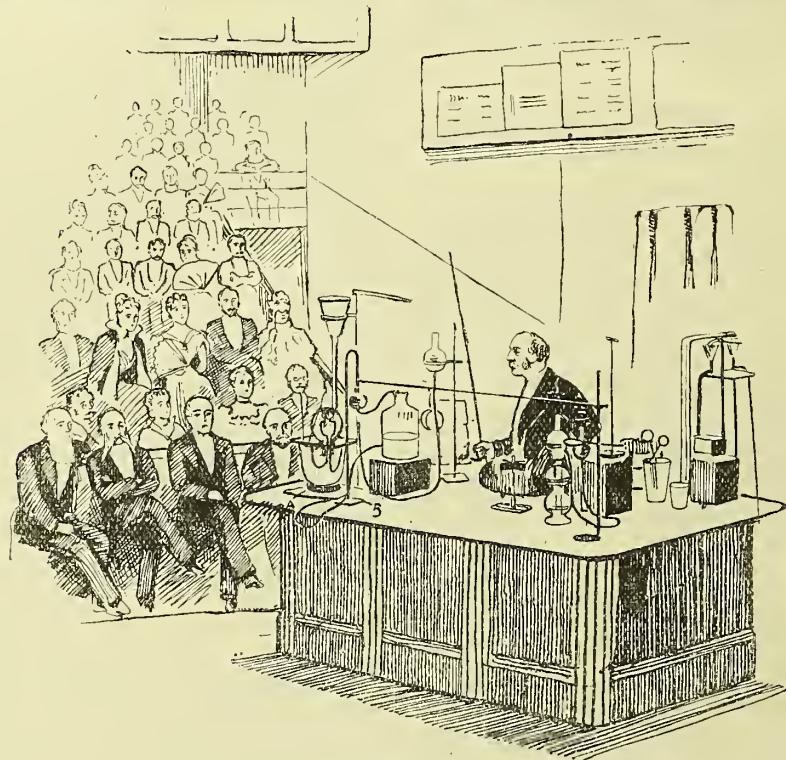
THE GASES OF SPRINGS.

Professor Rayleigh next spoke of the gas given off by the Bath springs. He said the proportion of argon appeared to be less than existed in the air. Subsequently, however, Professor Ramsay discovered helium, and then it occurred to him as an explanation of this that helium, being as inert as argon, might be present in the residue, and by its

the atmospheric envelope owing to its lightness, just as the atmosphere of the moon was believed to have been shed. This applies also to any that gets into the air from water-springs. We may put it to the thoughtful, What becomes of that matter which goes where we imagine there is no matter? The last topic which Lord Rayleigh discussed was the

VISCOSITY OF GASES

--that is, the resistance which they offer to friction obtained by passing them through a capillary tube. An experiment was performed, the apparatus employed being that in front of the sketch (B). Taking a capillary tube about 8 feet long, to one end was attached a litre globe filled with sulphuric acid coloured with indigo. The tube was connected with the top of this globe, and the bottom of the globe was connected by means of a tube with a receiver. The other end of the long tube was connected similarly with a litre globeful of air, which could be discharged from the globe through the tube by lifting a second vessel of sulphuric acid. This was done, the pressure exerted being just enough to give the air a free passage. It



LORD RAYLEIGH LECTURING.
ON THE FRONT BENCH ARE SIR J. CRICHTON BROWNE AND, TWO SEATS TO HIS LEFT, PROFESSOR JAMES DEWAR.

lightness compensate for the heaviness of the argon. He found the line D_3 , too, unmistakable in the spectrum of the residue of this Bath gas, and that showed the presence of helium. He did not, however, consider it to be present in sufficient quantities to make the suggested explanation tenable. In gas from the nitrogen spring at Buxton there is some 2 per cent. of argon, with a doubtful indication of helium. The question whether there is

HELUM IN THE ATMOSPHERE

he had endeavoured to prove by taking advantage of the greater solubility of argon in water. Professor Ramsay finds it to be four times more soluble. So Lord Rayleigh washed a large volume of air and otherwise treated it to get a helium residue, but none had been found—at least, no appreciable amount. He did not think there is as much as the ten-thousandth part in the air. Dr. Johnson Stoney, indeed, believes that had there been any atmospheric helium originally, it must long ago have been shed off from

took exactly eighty seconds to go from the one side of the tube to the other. Hydrogen was also tried in sight of the audience, and it took forty-five seconds. Air is taken as unity, and Lord Rayleigh finds that the viscosity of argon is 1.21, and of helium 0.96. This was the last experiment, but it was the one which seemed to rivet the attention of the front bench most, and Lord Rayleigh explained that it was so purely a mathematical thing that he could not expect a popular audience to appreciate its significance fully. Thus ended the lecture. He had some assistance in it from his son, a pale but clever-looking youth, who has become such an expert in gas-blowing that he is able to make out of a few cubic centimetres of argon a score or more of sparkling tubes for showing its spectrum, and some of these were exhibited amidst applause.

OLD LADY (to druggist): "Are you quite sure this is carbonate of soda, not arsenic?" Chemist: "Quite, ma'am. Try it and judge for yourself."—*The Great Divide.*

Legal Reports.

FLY-PAPERS AND THE PHARMACY ACT.

AT the Bloomsbury County Court, on Tuesday, January 21, before his Honour Judge Bacon, Q.C., the action was heard of the Pharmaceutical Society *v.* Walton, Hassell & Port. Mr. T. R. Grey appeared for the plaintiffs, and Mr. Danckwerts for the defendants.

Mr. Grey said the action was brought to recover a penalty incurred by the defendants for selling poisons contrary to the Pharmacy Act of 1868. The defendants are in a large way of business, and have a large number of oil-shops, one being at 244 Brixton Road, and on July 25 last at this shop they sold twenty-five of Mather's fly-papers for 8d. These fly-papers were sent to an analyst and carefully analysed. One of them was found to contain as much as 12.9 gr. of arsenic. In the whole twenty-five papers there was found to be an average of 8 gr. of arsenic to each paper. The papers were also analysed by Dr. Stevenson, and there was hardly any question as to the amount of arsenic contained in each paper. The twenty-five papers contained 200 gr. of this poison. The only question could be whether the sale of these fly-papers came within the restrictions of the Pharmacy Act. The label is as follows:—"Mather's chemical fly-papers, for poisoning flies, wasps, ants, mosquitoes, &c. Directions for use: For flies, wasps, ants, mosquitoes, &c., spread each paper on a dish or plate. Keep moist with cold water two or three times a day. Leave the tray or dish beyond the reach of children and out of the way of domestic animals." The reason why the paper should be moistened is that nine-tenths of the arsenic in the paper is extracted on the application of cold water, so that the liquid becomes of the most deadly and poisonous character, containing quite nine-tenths of the arsenic originally put into the fly-paper. Counsel was proceeding to explain that by the Pharmacy Act poisons could only be sold by persons qualified under it, when

Mr. Danckwerts, interposing, stated that it might simplify matters if he mentioned that his clients admitted the sale of the fly-papers.

The Judge asked if the question rested on whether there was enough poison in the papers to kill anybody.

Mr. Danckwerts replied that there were certain matters of common knowledge of everyday life which he desired to put before his Honour. The case was a test one which, if carried, would affect the British public to an intolerable degree.

Mr. Grey (continuing) stated that arsenic was a poison named in Part 1 of Schedule A of the Act, and if sold by a chemist or druggist the purchaser must be known to or introduced to him, and the seller must enter in a book provided for the purpose the date of the sale, the name and address of the purchaser, and the purpose for which the poison is required, besides labelling the bottle or parcel "Poison." If arsenic can be sold in the shape of fly-papers by anybody to anybody, it can be obtained from the papers in very large quantities, and it was necessary in order to safeguard the public to restrict such sales. In the case of the Pharmaceutical Society *v.* Harmson, the article sold was Powell's balsam of aniseed. This aniseed contained $\frac{1}{10}$ gr. of morphine. The Master of the Rolls held that it was still a poison though mixed with other articles. A poison put into a bottle of wine does not cease to be a poison, and it is clear that when poison is put into medicine and sold, the person who sells it must sell the poison there is in it.

Mr. Danckwerts admitted the sale of the fly-papers by his clients. He further admitted that they were not duly qualified to act as chemists.

Dr. Benjamin Horatio Paul, consulting chemist and commercial analyst, stated in reply to a question from the Judge that he was a graduate of a German University. He had received certain fly-papers from a Mr. Partridge for the purposes of analysis. Twenty-five papers were sent to him. Of these he now had eleven in his possession. He gave three to Dr. Stevenson. He numbered the other papers, and made a careful analysis of them. There was also a joint-analysis, which he made with Mr. Bevan on behalf of the defendants. They agreed as to that analysis. Four fly-

papers were examined in the joint-analysis with Mr. Bevan. The average of the analysis he first made by himself was 8 gr. of arsenic to each paper. The most found in any one paper was nearly 13 gr. The result of the joint-analysis with Mr. Bevan was an average of 11 gr. and a fraction in each. These were not analysed separately. The arsenic contained in the papers would be dissolved by being placed in the water, and the greater part of the arsenic would be extracted in a short time even by cold water.

By Mr. Danckwerts: The witness said he was fairly well acquainted with articles of commerce, being a commercial analyst. The quantities were obtained by warm water—not by boiling water. The only reason for employing warm water was that the arsenic could be more quickly extracted: a greater quantity of arsenic would not be obtained. An expert would not be able to obtain a greater quantity of arsenic from a fly-paper than an unskilled person. All the arsenic would be extracted by soaking them in water.

By the Judge: The only test he subjected the papers to was to soak them in water. He obtained the poison in the form of a compound of arsenic acid, ammonium, and magnesia. He should describe it as arsenic. There was an average of 8 gr. of pure arsenic to each fly-paper. It would be possible to separate the ammonia and the magnesia from the arsenic.

By Mr. Danckwerts: What was obtained from the papers was a chemical compound properly called arsenic. Arsenic mixed with flour would not be a chemical compound, but a mixture. He did not try to separate the ammonium and magnesia from the arsenic, as there was no occasion for doing so. By a preparation of arsenic he understood a medicinal preparation containing arsenic. It might be a mixture or it might be a compound. He arrived at the quantity of arsenic contained in the papers by calculation. The chemical compound of ammonium, arsenic, and magnesia always presented a constant quantity of arsenic. These substances only combine in certain quantities. The proportions are constant. The formula could be obtained in any standard text-book: Thorp's, for example. The substances compound themselves from their adherent nature. Many articles of commerce of everyday use contain arsenic, and in a form that can be extracted the same as from fly-papers. A green poster of the late Sir Charles Hallé's concert in Manchester, handed to witness, might or might not contain arsenic. He could not tell on cursory examination. He did not think arsenic could be extracted from the poster by simply placing it in water. With reference to some pieces of cloth handed up, the witness returned the same answer. He should not think any coloured cloths contained arsenic in a soluble form, when in the state offered for sale. Sheep-dip, of course, contained arsenic in a soluble form. Zinc, lead, bronze, &c., also contained it, but only infinitesimal traces would be found.

By Mr. Grey: The arsenic would be put into the fly-papers in a soluble form. During the last few days he had examined six different specimens of wall-papers, and had not found the slightest trace of arsenic.

By the Judge: A fatal dose of arsenic varies from $\frac{1}{2}$ gr. to 2 gr. Two grains is looked upon as a very dangerous dose. It acts too rapidly to be a cumulative poison.

Dr. Stevenson, M.D., official analyst to the Home Office, stated that he received three fly-papers from the last witness for purposes of analysis. He carefully analysed one of them, and found it to contain $11\frac{1}{2}$ gr. of white arsenic. The arsenic could have been easily extracted from the fly-papers by the application of water. By following the directions on the papers a coloured liquid is obtained which, according to the amount of water, varies from the colour of whisky to that of dark-brown sherry, and is almost tasteless. It would scarcely be possible to perceive any flavour, certainly nothing unpleasant. Two grains of arsenic would certainly be a fatal dose; probably a grain. A fly-paper such as he examined would be capable of killing about six people. He remembered a case where, a few years ago, eleven people were killed by fly-papers, in a northern city, and two people were convicted and executed. There had also been a later—a celebrated—case where fly-papers had been used, and he had been called upon to give evidence.

By Mr. Danckwerts: In the analysis he had employed first cold, then warm, water. Warm water was more speedy, but the end arrived at was the same. The greater part of the

arsenic would be extracted after only a few minutes' soaking, but it would take some hours to extract the full quantity of the arsenic. The poison extracted from the papers was chiefly in the form of white arsenic. He was of opinion that there were not many articles of everyday commercial life which contained arsenic in a soluble form, except for special purposes in connection with manufactures or arts. The pieces of cloth produced probably contained arsenic in an insoluble form, but it would be impossible to say from merely viewing it. The arsenic from one of the fly-papers could be extracted in about two tablespoonfuls of water or rather more.

For the defence Mr. Edward John Bevan, analyst to the county of Middlesex, was called. In conjunction with Dr. Paul he had examined four of the fly-papers. They extracted the arsenic by means of water which was nearly boiling, and repeatedly washed the residue left in the papers until all the arsenic had been extracted. They found about 10.92 per cent. of arsenic, or, in grains, 11.6. The arsenic was extracted in the form of arsenious oxide. He agreed with Dr. Paul as to what was contained in the papers. The ammonium, arsenic, and magnesia only combine in certain proportions. If the papers were soaked in cold water only there would only be a small quantity of the arsenic extracted. In the ordinary dry fly-paper the substance is disseminated more or less equally through the paper. The fly-paper in the process of manufacture first absorbs it in the moist form, and is then allowed to dry. He knew as a fact that it was put into the fly-papers as a solution of arsenic and caustic soda.

The Judge would not allow the witness to be examined as to whether arsenic was contained in other articles offered to witness for the purpose of examination.

Mr. Danckwerts contended that if these fly-papers were to be prohibited by the Act, then many other articles of commerce in use in everyday life would come under the same category.

Mr. William Thompson, member of the Council of the Institute of Chemistry, F.R.S.Edin., and F.C.S., stated that he had analysed some of Mather's fly-papers, but not any of the papers in court forming the subject of the present action.

Mr. Grey protested that this was not evidence in the case before the Court.

The Judge said he could not see the relevancy of this examination. If there were other articles of daily life containing arsenic, the sale might be prevented by unqualified persons. It was only a waste of time to go into extraneous matter.

Mr. Danckwerts, on behalf of the defendants, submitted that this case was different to others which had been before the Court, where the preparations containing poisons had been medicinal preparations. This was a chemical compound, and not a preparation. The evidence of Dr. Paul and Dr. Stevenson was perfectly clear that they understood the word "preparation" to be something else than a compound. In the fly-paper it is a chemical compound that is sold, and, therefore, not a poison within the meaning of the Act. It was not the intention of the Act to include within the prohibition any commercial article. You could not stop at fly-paper, you must go on to the wall-paper, and even other articles.

The Judge: If a man sells a laurel-bush does he come within the Act?

Mr. Danckwerts: A nurseryman is not prevented from selling a laurel-bush because it contains prussic acid in some shape or the other. It was absurd to say that these commercial articles were only to be sold by duly qualified persons. At that rate, drapers would have to be registered by the Pharmaceutical Society before they could sell any of the cloths before the Court. These fly-papers, which were not used as a medicine, had been sold for years in grocers' and oil shops all over the kingdom. It was well known that wall-paper contained arsenic. People had been poisoned through living in rooms containing arsenic wall-paper. The Act could not have been meant to cover such cases as these.

Mr. Grey quoted from Mr. Justice Hawkins that "nothing can to our understanding be clearer than that the object of the Act was to provide for the safety of the public, and to guard all members of the community from the dangers arising from the sale of poisons, and that the whole object

of the Act would become a dead letter were we to declare than an unqualified person could lawfully and with impunity sell any poisons." In that case the poison was contained in a vermin-killer.

The Judge said he did not think there was any need to go further into the case. It really was a preparation of arsenic that was sold. As the case was not to rest there, it was not necessary to deliver a considered judgment. The case was so absolutely clear on authority that it was not necessary to discuss it. As to the statement that the article sold should be a medicinal preparation, that was disposed of in the case of the vermin-killer decided by Mr. Justice Hawkins. Whether it was reasonable or not, and whether difficulties might some day arise, was no concern of the Court. Probably other preparations might come under the penalties of the Act. It had been proved that these papers contained arsenic, and that it was a preparation was clear from one of the chemists describing how it was done. It was a preparation of arsenic, sold by an unqualified chemist, and therefore the defendants had incurred the penalties of the Act. Judgment for the plaintiffs, with costs.

On application of Mr. Danckwerts, leave to appeal was given. Mr. Danckwerts said he would like to point out that, in consequence of His Honour's decision, it would be necessary for all tradesmen to become duly qualified chemists.

PAREGORIC AND THE PHARMACY ACT.

At the same court, and immediately after the case just reported, another action by the Pharmaceutical Society against a defendant named Age was heard. Mr. Grey again appeared for the plaintiffs; and Mr. Moore, solicitor, for the defendant.

Mr. Moore said that after what had just taken place he did not see that his client could resist judgment. The article in question was paregoric elixir. His client had held two positions in hospitals as dispenser, and had he been in business before the passing of the Pharmacy Act would have been entitled to act as a chemist. He had a shop where he sold patent medicines, amongst them this paregoric elixir, which was an article of commerce in almost daily demand.

The Judge said the real question was how many people could have been poisoned by his negligence.

Mr. Moore said it was utterly impossible for any person to have been poisoned.

His Honour held that he must have evidence on that point.

Mr. Grey said the defendant was charged with keeping open shop for the selling and compounding of poison in the form of paregoric elixir. Two bottles of the article had been purchased at defendant's shop for 3d each, and one was found to contain $\frac{1}{2}$ gr. of morphine, and the other $\frac{1}{2}$ gr. of morphine. In the case of the Pharmaceutical Society v. Harmon, Mr. Justice Hawkins had held that $\frac{1}{10}$ gr. of morphine came within the prohibition of the Act.

Mr. Ernest John Eastes, analyst, F.I.C., deposed that he analysed the contents of the two bottles of paregoric elixir purchased at defendant's shop, and found one to contain nearly $\frac{1}{2}$ gr. of morphine and the other nearly $\frac{1}{2}$ gr. In reply to the Judge, he said that $\frac{1}{20}$ gr. had before now proved to be a fatal dose.

Mr. Moore, for the defence, said he could only address the Judge on the question of mitigation of the penalties.

The Judge, in deciding for the plaintiffs, said he had no power to reduce the penalties. It was a matter of great importance to the well-being of the community that the act should be enforced.

ACTION UNDER THE PHARMACY ACT (IRELAND).

In the Belfast Summons Court on January 15, before Messrs. Garrett Nagle, R.M. (in the chair), and J. Macauley, J.P., the Pharmaceutical Society of Ireland sued Matthew Ballantine and Joseph C. Carson, trading in partnership as "J. Lizars," of 73 Victoria Street, Belfast, for (1) having on October 7 last sold a poison—bichloride of mercury—to Andrew Downey, the said Andrew Downey being a person unknown to them and not having been introduced by a person known to them, contrary to the provisions of the Sale of Poisons (Ireland) Act, 33 and 34 Vic., cap. 26, sec. 2; (2) with keeping open

shop for retailing and dispensing poisons, they not being properly qualified under the Pharmacy Act (Ireland), 1875; and (3) with selling and retailing and dispensing a poison on the day named.

Mr. S. Millin, B.L., appeared for the plaintiffs, and Mr. E. J. Shaw for the defendants.

Mr. Millin explained the Acts under which the summonses were taken, and then asked that an addition should be made to the summonses so as to bring them under secs. 15 and 17 of the Amendment Act, as he preferred to rely upon them.

Mr. Shaw objected, but the Magistrates granted the application.

Andrew Downey deposed that on October 7 last he purchased an ounce of pyrogallic acid, an ounce of sal ammoniac, and an ounce of bichloride of mercury in the defendants' shop from a young man.

By Mr. Shaw: He told the young man he wanted the bichloride for intensifying negatives. He signed his name in the usual book provided under the Poisons Act. He had a camera at home, and knew a little about photography. He purchased some bromide-paper. He was instructed by the Society to purchase these articles.

Samuel Templeton, analytical chemist, said the article submitted to him was a deadly poison, and sufficient to kill all the legal fraternity in Belfast. (Laughter.)

Mr. Millin said neither of the defendants was on the register of druggists or chemists.

Mr. Shaw submitted that no case had been made out. The defendants employed a registered druggist, and all the chemicals and poisons used for photographic purposes were under the control of Mr. Hogg, who, it was admitted, was a registered druggist. The summons charged them with having sold these articles to a person unknown to them, but, as a matter of fact, they knew he was employed by the Society.

In reply to the Chairman, Mr. Millin admitted that the assistant was registered, but he contended that if a person was himself registered he could employ another, but that a non-registered person could not employ one who was registered.

Mr. Nagle: You have a case, but has the summons been properly framed?

Mr. Millin said the summons was framed under section 30 of the Act of 1875. The section had been partially repealed, but re-enacted in sections 15 and 17 and the Amendment Act of 1890.

Mr. Nagle said it was clear that the charge was not framed according to sections 15 and 17 of the Act 1890.

Mr. Hogg said he was manager for the defendants. He detailed the facts regarding the sale of the articles to Downey. When he asked for the bichloride of mercury witness said he supposed he was going to intensify negatives, and he said he was. Witness said he would require to be cautious, and he said he had used it dozens of times. He had seen Downey before this date, and he knew he was a servant of the Pharmaceutical Society.

To the Court: He knew he was a servant of the Society before he wrote his name in the book.

Mr. Nagle said on the whole evidence the Magistrates considered that the man was not known to the defendant strictly within the meaning of the Act of Parliament. They considered it only a technical offence. A little more care would have obviated the difficulty. Under the circumstances they would make a nominal penalty in the first summons of 10s.

Mr. Millin said if they considered it necessary to ask to have a case stated they could apply within the three days allowed.

Mr. Nagle: Certainly.

Mr. Shaw asked to have the other two summonses dismissed with costs.

Mr. Nagle said they would not give costs.

SALE OF FOOD AND DRUGS ACT.

SEIDLITZ-POWDERS.

AT Brentford Petty Sessions, on Saturday, January 18, before General Tremenheere (Chairman), Sir G. S. Measom, the Rev. Dr. Hughes, and Messrs. Sharpe, Montgomery, Carves, and J. Allen Brown, Mr. Ernest Frank Strick-

land, chemist and druggist, of the Broadway, Ealing, trading under the style of Bruce's Drug-stores, was summoned by Walter Tyler, an inspector of the Middlesex County Council, for having sold seidlitz-powders not of the nature, quality, and substance demanded. Mr. F. Walker, solicitor, defended.

Inspector Tyler said the proceedings were taken under the 6th section of the Act, and he drew attention to the 54th section of the Medical Act, which required the General Medical Council to compile the British Pharmacopœia. He contended that all medicinal compounds must be prepared according to the standards laid down in that book, to which, in 1890, was added the component parts of seidlitz-powders, and he cited *White v. Bywaters*, 51 J.P., 821, in support of his contention that justices should consider the British Pharmacopœia a standard under the Food and Drugs Act.

Wm. Randall, assistant to the inspector, said that he asked for and received a box of seidlitz-powders, for which he tendered 1s., and received 1½d. change.

Cross-examined: Defendant, who served him, did not inquire which kind of powders he would have, nor whether he wanted the more expensive, or best, or strongest kind.

Inspector Tyler said that the defendant declined to have the box divided, as he might have done, so the whole packet was sent to the county analyst, upon whose certificate he took proceedings. Before he left the shop the defendant told him something about the powders being too strong, but he did not pay much attention.

In reply to Mr. Walker, he denied having seen a copy of Bruce's drug-list in which seidlitz-powders appeared at 7d. and 10½d. the packet. He did not open the packet, but sent it direct to the analyst. This was the first case he had taken in respect to these powders, but not the first he had had analysed.

Mr. Walker: Do you not know that practically every chemist sells two or three kinds of seidlitz-powders?—Yes, if asked for specially. I presume you are prepared to tell this Court that every chemist who sells the powders not in accordance with the British Pharmacopœia, when asked for them, commits a criminal offence?—Yes. You seriously ask the Bench to believe that?—Yes. You therefore ask the Court to say that every chemist has committed a criminal offence?—Just the opposite. I have purchased several specimens, and have found them correct; therefore every chemist cannot have committed a criminal offence.

Mr. Edward Bevan, official analyst to the County of Middlesex, produced his certificate, which certified that the blue packet contained 204 gr., a mixture of Rochelle salt and bicarbonate of soda. The proper quantity should have been but 160 gr. One packet contained 210 gr. The white packet contained an average of 46 gr. of tartaric acid, the proper quantity being 38 gr. Cross-examined, he said he should think anyone asking for seidlitz-powders should have them prepared according to the British Pharmacopœia formula. He analysed the powders according to that formula.

By the Bench: There was a technical Latin term for seidlitz-powders. In English it would be, he thought, tartrated soda.

Cross-examination continued: He might have examined four or five other packets, and found them correct. He was aware the British Pharmacopœia did not contain the official name or synonym of "seidlitz-powders." It mentioned "effervescent tartarated-soda powders," which a footnote said was commonly known as seidlitz-powder. He did not know that every chemist sold two or three kinds of seidlitz-powders, and that some were flavoured with lemon or ginger.

Mr. Walker: Do you consider any deviation from the British Pharmacopœia would be wrong?—Yes. Even if wrapped in pink paper?—Well, no. But the Pharmacopœia mentions blue?—I should not report on that. You found the ingredients pure?—Yes; I have said nothing about injurious. A double powder is not two mixed, but a larger amount of Rochelle salt?—I believe so. Do you consider that seidlitz-powders being made stronger would have an injurious effect?—Well, if I were ordered to take 1 gr. of anything, and my chemist gave me 2 gr., I should consider it wrong. Even if the grain is not injurious?—Yes. When you received the packet you were aware of the section requiring it to be divided into three parts?—That is not a matter for me, but it was not so divided. Therefore you

were bound to divide it into two halves?—Yes. Did you do it?—Yes; I took six of each; I took alternate ones of each. You did not divide each packet into half?—No.

To the Bench: There was an equal excess of Rochelle salt and soda.

Mr. Robert Watts, of the Apothecaries' Hall, London, pharmaceutical chemist, past President of the Sheffield Pharmaceutical Society, and lecturer upon pharmacy to the Sheffield School of Pharmacy, supported the last witness. He considered it to the prejudice of the purchaser to obtain powders such as that in question if "seidlitz" were asked for. It would be wrong to prepare drugs in any way outside the British Pharmacopœia.

Cross-examined: If chemists sold two or more qualities of seidlitz-powders they should not do so.

Mr. Walker: Would you consider you were committing an offence if you supplied a stronger powder when you were asked for it?—No. Would you consider it an offence on the part of a chemist to supply seidlitz-powders made up with flavourings such as lemon or ginger?—No. It is no offence even in the face of the Pharmacopœia?—My point is, if a man asks for seidlitz powders he should get those in accordance with the British Pharmacopœia. If a man wanted an extra strong seidlitz-powder you would not consider a chemist committed an offence if he prescribed it outside the British Pharmacopœia?—No. Do you consider this seidlitz-powder injurious to a person?—I am not a medical man, so it is not a fair question. Have you ever known a prosecution over seidlitz-powders?—I have. And conviction?—That I shall not answer.

Mr. Walker contended that no criminal offence had been disclosed. The prosecution was an attempt to drag the British Pharmacopœia into the Food and Drugs Act, and he hoped the Bench would not sanction such a thing, particularly as the Royal Commission who sat on the point refused to recommend its inclusion. If his client had been asked for effervescent tartarised-soda powder he would have been compelled to serve according to the formula; but in this case he was asked for a compound which might mean that or something else, commonly known as seidlitz-powder, and not mentioned in the British Pharmacopœia. In common with other chemists he kept two kinds of these powders. The cheaper was in accordance with the Pharmacopœia, but he had another quality—the one in question—which he labelled "Hygienic," a superior article made in the same proportions as the inferior, containing more of each constituent. He distinctly asked the inspector's assistant if he wanted the best, and received a reply in the affirmative, and served him accordingly with the special article, charging the higher price. It was admitted if he were asked to specially prepare a seidlitz powder no offence would be committed. In the case of *White v. Bywaters* the decision was expressly not on the question relative to the British Pharmacopœia, and in the well-known sweet spirits of nitre case, heard at Stockport, the question at issue was thoroughly threshed out and decided in favour of the defendant. On these grounds he based his contention, and he took the further point that the analyst had wrongly divided the sample. He should have divided each paper so that the defence might have had the chance of analysing the moiety of the ones he himself used.

The defendant, sworn, said that his Hygienic powders were prepared according to the formula of the Viking Food and Essence Company. The inspector's assistant distinctly wanted the best, which he doubted not meant the strongest ones.

Mr. Sharpe: But how did he understand the word "best"? He might have thought it meant best or newest or freshest drugs?—All my drugs are fresh. It is usual to have two different strengths.

Mr. Tyler: If a medical man sent to you for seidlitz-powders, which kind would you send?—I should send a Hygienic one, because they are mostly asked for.

Mr. Tyler: In the face of the British Pharmacopœia?—If a doctor wanted one of those he would send the Latin official term.

Mr. Robert Stevens, analytical chemist to the Viking Food and Essence Company, gave evidence as to the different strengths made to order by that company.

Mr. Wm. Hy. Symons, past examiner to the Pharmaceutical Society, stated that the term seidlitz-powder was not an

official one. He had known stronger ones than that in question. He considered a variation of 5 gr. would have no appreciable effect on a patient—an extra glass of water would do as much. If he asked for a seidlitz-powder he should probably expect to get a strong one.

Mr. Allen Brown: Do you consider an excess of 44 gr. would make any difference in a young person?—It would be less than a dose of tartaric acid then.

Dr. Herbert Neville, M.R.C.S., gave evidence of a corroborative nature.

Mr. David Peters, a chemist and druggist of twenty-five years' standing, said that he had always sold extra strong seidlitz-powders and had never been prosecuted.

The witness Randall, recalled, swore no question was asked him as to the quality of powder he required.

The Bench, after a long consultation, found that the inspector's assistant did not ask for best powders. They had great doubt of the meaning put upon the word "best," which need not necessarily mean the strongest, but might have implied the purest. On all the other points they agreed, and they should fine the defendant 5s., and 2*l.* 2*s.* costs.

Mr. Walker asked for a case upon his points, and was directed to put them into writing.

BEESWAX.

AT Ashford (Kent) Police Court on Tuesday, Harold Kay, manager of the Ashford Co-operative Society (Limited), was summoned for selling beeswax which was not of the nature, substance, and quality demanded. Mr. Keeble, of London, defended, and at the outset contended that beeswax was not a drug, and therefore did not come within the meaning of the Act. Asked whether he could point to any legal decision on that point, Mr. Keeble stated that he thought his contention was self-evident. Beeswax was sold for ordinary domestic purposes, such as polishing furniture and waxing tailors' threads. He was unable to find any decision on the point he had taken.

The Bench decided to hear the evidence, and the purchase of $\frac{1}{4}$ lb. of beeswax for 6*d.* was proved. The Public Analyst's certificate stated that the sample examined contained 50 per cent. of beeswax and 50 per cent. of paraffin.

Mr. Adams, M.R.C.S., the public analyst, said there could be no hesitation in holding that beeswax was a drug. It was used both externally and internally. On page 76 of the British Pharmacopœia the Bench would see that yellow wax was included in twenty separate things for use as medicine. Mr. Keeble asked Mr. Adams whether the wax was only a vehicle used to carry the medicine which was being administered. Mr. Adams replied, Not at all. It was one of the fundamental materials in the manufacture of all those pharmaceutical preparations. Mr. Keeble: You mean that wax has healing properties in a medicine? Mr. Adams: Undoubtedly. Mr. Keeble: You use water? Mr. Adams: Certainly. Mr. Keeble: Do you call it a drug? Mr. Adams: It is not a pharmaceutical preparation. Mr. Keeble: Is water a drug? Mr. Adams: I won't say it is a drug. The Clerk to the Bench said Mr. Keeble was not entitled to ask such questions which were irrelevant to beeswax. Mr. Keeble replied that he was entitled to ask questions to illustrate the point he wished to urge—viz., that the wax was not a drug, but was simply used to carry the drug. Addressing the Bench, Mr. Keeble contended that Mr. Adams was present in the capacity of an expert and not as a public analyst, and thought that he should have had notice of his attendance to give evidence. He thought he was entitled to an adjournment for the decision of the point he raised. The Bench intimated that his request would be granted on payment of Mr. Adams's fee, 3*l.* 3*s.*, and 4*s.* 8*d.* railway fare. This condition was declined; and Mr. Keeble then called the manager, who stated that the wax had been in stock since September, 1893, when 4 lbs. were purchased. It was generally sold for cleaning furniture and to tailors for waxing threads. He was unaware that pure beeswax was worth 2*s.* 6*d.* per lb., and paraffin wax 4*d.* per lb. In the Stores list pure beeswax was priced at 1*s.* 6*d.* per lb., and the wax in question was purchased at 1*s.* 3*d.* per lb. The Bench decided that the article was a drug, and that it had been adulterated. A fine of 10*s.* was imposed, together with 1*l.* 18*s.* 8*d.* costs, the analyst's fee being reduced to 1*l.* 1*s.*, the remainder being paid by the county.

CHEAP THERMOMETERS.

IN the Lord Mayor's Court, on Monday, the case of Millard v. Roberts (Limited) came on for hearing before the Recorder (Sir Charles Hall, Q.C., M.P.) and a jury. The plaintiffs (Messrs. Millard Brothers, of Houndsditch) sought to recover 18*l.* 14*s.* 6*d.* for thermometers supplied to the defendants, J. R. Roberts (Limited), of Stratford. The defendants had previously bought thermometers from the plaintiffs by sample. The present action arose out of the sale of 150 thermometers at 2*s.* 6*d.* each, and which the order stipulated should be "the same as before." The question was whether they were "the same as before." The plaintiffs said they were, but the defendants said that 39 of them were defective, the wood being "streaky" and the brass mountings not sufficiently heavy, whilst the tubes did not rise to the top. These 39 thermometers were consequently rejected, and the defendants paid the full amount of the plaintiffs' account into court, less 4*l.* 17*s.* 6*d.* the value of the thermometers returned. The rejected thermometers, which were of a very large size, and were intended for advertising purposes, were brought into court and inspected by the Judge and jury, and in the result a verdict was returned for the plaintiffs for 16*l.* 6*s.* 6*d.* Judgment was entered accordingly, with costs.

SUCCESSOR TO A REGISTERED DENTIST.

AT the Dundee Sheriff Court, last Friday, Sheriff-Substitute Campbell Smith had before him a case under the Dentists Act, in which the British Dental Association sought, through their Secretary, to recover penalties from A. Davie, a local dentist (unregistered), for infringing the provisions of the Dentists Act. Defendant, who pleaded not guilty, carries on the business of the late Dr. John Stewart, who had the largest dental practice in the town. The complaint stated that during the last five months of 1895 the defendant had attached to the gables of his house or the windows, "A. Davie, successor to Dr. Stewart," and during a portion of the time the additional words "Surgeon-Dentist," also inserting in the "Dundee Directory" the description of "Dental Institute," and an advertisement wherein there were *inter alia* "popular dentistry," "dentist," "surgeon-dentist," "successor to Dr. Stewart." There were altogether eight counts in the complaint. Mr. Andrew Buchanan appeared on behalf of the complainer, Mr. H. S. Glenny represented defendant, and Mr. A. M. Ferguson watched the case of behalf of the Unregistered Dental Practitioners' Association.

Before Mr. Davie pleaded, there was a long argument in regard to the relevancy of the charge, in the course of which Mr. Glenny stated that after Dr. Stewart's death his widow continued to conduct the business with the aid of assistants. After a time she sold the business to Mr. Davie, and he entered into the premises as successor to Dr. Stewart in May 1895. Dr. Stewart's old signs were then existing. Mr. Davie had now removed every objectionable sign.

The Sheriff, summing up the argument, said he read the Act to mean that it was to be penal for any man to call himself a dentist or dental practitioner, or to use any such words as would have the effect of passing himself off as registered under this Act of Parliament, and that he was "specially" qualified to practise dentistry—that was to say, that he was sufficiently qualified to practise dentistry as to entitle him to be registered. It was to stop a representation of that kind, unless where the person was registered. The question here was whether in this complaint there was enough to set forth that Davie had violated the provision of the Act. He thought the complaint sufficiently set that forth. The result of legislation like this was to set aside certain professions for certain people. A man might be qualified to be a Professor of Chemistry, and yet be prosecuted if he were to sell goods upon the representation that he was a chemist. The word dentist was rendered sacred to this registered body, and no one was entitled to use it unless a member of that body. If a prize-fighter called himself a dentist he would be liable to prosecution under this Act of Parliament, although he had no instruments for extracting teeth except his fists. This legislation had for its purpose the preservation of innocent and gullible

members of the public from believing representations that were made, and from trusting themselves to the skill of persons who pretended to be doctors, chemists, and dentists, and who had no proper skill or qualification, and who might do a great amount of mischief to them. As to this particular complaint, "Successor to Dr. Stewart" was an ambiguous term, and reminded him of a St. Andrews story about a gentleman who used the title of Major. He was once golfing in St. Andrews, and someone asked his "caddie" to what regiment the Major belonged. The "caddie" said, "Weel, I dinna think he's a Major at a'. He married a Major's widow, and keeps up the title." (Laughter.) That was the kind of successor Mr. Davie may have been.

After some conversation with the solicitors as to the nature of the plea to be tendered, the Sheriff said he did not think it was a serious case at all. It did not require a gentleman from London to protect the teeth of the people of Dundee, as the Small Debt Court could do it as well. Mr. Davie finally denied the charge, and the case was continued till Monday for proof.

When the case was resumed, Mr. Glenny, for defendant, stated that, after consultation with the prosecuting solicitor, he had agreed to admit the use for a limited period of the words, "Dr. Stewart, surgeon-dentist," on condition that the other charges were departed from. Some amusing conversation followed before the Sheriff gave his decision. In doing so, he said he did not see that it required a University training any more to be a dentist than a cabinet-maker or a jeweller. (Laughter.) His duty was to administer the law according to its fair meaning and intent. Every penal Act required to be strictly construed, more especially an Act imposing penalties, which had the double purpose of protecting a monopoly and protecting the public. The latter was a social necessity; the former was not, unless in so far as it contributed to the latter. No monopoly could be justified by the principles of any code of social philosophy except the principle that the special monopoly is upon a wide view of the interests of Society for the greater advantage of the whole community. The professions of law and of medicine were strongly fenced in as monopolies because a special education and standard of attainment was expedient in the public interest. That dentistry—that branch of the medical and surgical art which related to the care of the teeth—should be constituted a monopoly in the interest of specially-skilled qualified persons, but also in the interests of the public, he was very far from doubting. But he did not see why a joiner, or a blacksmith, or a barber, or anyone that could use pinchers should not draw a tooth, or a jeweller make false teeth. As to the terms "dentist" and "dental practitioner," he might think that the statutory consecration of a word like "dentist" to the exclusive use of an institute, however educated and genteel its membership, was an interference with the free use of the English language; but he had not been able to discover how he could help himself when he found that under a similar Act of Parliament Mr. Justice Hawkins, one of the most acute and accurate logicians of the English Bench, decided that it was penal for a country blacksmith to describe his establishment as a "veterinary forge." Turning to the case in hand, the Sheriff said that the criminality of failure to remove two painted words did not appear to him to be great when weighed in the scales of morality, and, if possible, still less when weighed in the scales of Mammon. He had no reason to believe that Mr. Davie had deprived any dental registered monopolist of any lucrative part of his business. At all events, he did not feel bound to support any monopoly by the imposition of a vindictive punishment. The fine he imposed was the nominal one of 1*s.*, and the expenses he allowed by way of enforcing and advertising the statute were 2*l.* 2*s.*, the alternative being six days' imprisonment.

"KNOWS-ALL-ABOUT-IT" comes in "Have you terebene? It is for colds? About a teaspoonful is a dose?" I correct him here, and he continues, "Oh, yes—5 drops. How do you sell it?" I tell him. "Good gracious! What an awful price for turpentine!" "I thought you said terebene." "Yes, I know, but it's the same thing, isn't it? I assure him it is not, and give him the price of turps. "Give me an ounce of pure terebene; but it's an awful price for turpentine."

Bankruptcy Report.

Re TOM SARGENT STOCKMAN, Jun., 37 Walbrook, Chemical Agent.

AN application for this bankrupt's order of discharge was made on Tuesday last to Mr. Registrar Linklater at the London Bankruptcy Court. Mr. C. A. Pope, Assistant-Receiver, reported that the bankrupt failed in December, 1891, with ranking liabilities £620*l.*, and that the assets, valued by the bankrupt at 5*s.*, had realised 1*s.* 7*d.*, a sum insufficient for the costs and expenses of the proceedings. The bankrupt, from 1882 to July, 1889, acted as manager to Mr. Charles Dasnieres, a chemical-merchant. He was paid by commission, and also made secret profits on his own account in trimming pitch, in which article Mr. Dasnieres chiefly dealt. In 1889 the bankrupt sued Mr. Dasnieres for £30*l.* for commission due, and the latter counter-claimed £449*l.*, in respect of the secret profits made by the former. In April, 1891, the trial resulted in a verdict for the bankrupt on his claim, and for Mr. Dasnieres on the counterclaim, and costs. The bankrupt, in August, 1889, commenced with a capital of 70*l.* to trade on his own account as a pitch and tar dealer; but in June or July, 1891, he discontinued the business, which was subsequently carried on by his uncle, Mr. Tom Nelson Stockman, who put 40*l.* into the business, and employed him as manager. The offences reported by the Official Receiver were—(1) Insufficient assets to show 10*s.* in the pound on the unsecured debts, (2) imperfect books, and (3) trading with knowledge of insolvency. The order of discharge was suspended for two years.

Gazette.

PARTNERSHIPS DISSOLVED.

Chittenden, T. H., and Barnes, L. S., under the style of Chittenden & Barnes, Wbitwell and Wheathampstead, Herts., surgeons, apothecaries, and accoucheurs.

Coleman, H. W., and Waite, H., under the style of Coleman & Waite, Leeds, surgeons, apothecaries, and general medical practitioners.

Fowler, W., and Fowler, L., under the style of Fowler & Co., Devonport and elsewhere, manufacturers of artificial teeth.

Hartley, W., and Speak, H., under the style of H. K. Beaumont & Co., Hindlersfield, dyewood cutters and grinders.

Randell, R. M. H., M.D., and **Bolus, H. B., M.B.**, Beckenham, and elsewhere, physicians, surgeons, accouchers, and general medical practitioners.

Sampson, G., and Barfoot, J. R. D., under the style of Sampson & Barfoot, Chesterfield, chemists and druggists.

Talmadge, F. T., and Woolerton, R. E., under the style of Talmadge & Co., otherwise Talmadge & Woolerton, Croydon, mineral-water manufacturers.

Wilson, B., Wilson, H., and Rayner, P. A., under the style of Rayner, Wilson & Co., Blackpool, manufacturers and dealers in aerated and mineral waters, &c.

Deeds of Arrangement.

Hardcastle, Hugo Macauley, 18 Chester Crescent, late Archbold Lodge, Newcastle-on-Tyne, surgeon. Trustee, Robert Allen, 24 Granger Street West, Newcastle-on-Tyne, accountant. Dated, January 17; filed, January 18. Liabilities unsecured, £380. 9*s.*; estimated net assets, £5*l.* The following are scheduled as creditors:—

	£ s. d.
Bankers' claims	100 0 0
Blenkinsop, —, Newcastle-on-Tyne	11 0 0
Brady & Martin, Newcastle-on-Tyne	27 0 0
Mawson, Son & Weddell, Newcastle-on-Tyne	47 0 0
Robertson, A., & Sons, Newcastle-on-Tyne	19 0 0
Rosenberg, M. L., Newcastle-on-Tyne	93 0 0

Lyle, Samuel Francis, 128 Peascod Street, Windsor, mineral water manufacturer. Trustee, William Izard, 52 Gracechurch Street, London, accountant. Dated January 16; filed January 20. Unsecured liabilities, £1511. 1*s.* 11*d.*; estimated net assets, 400*l.* The following are scheduled as creditors:—

	£ s. d.
Bankers' claims	50 0 0
Barrett & Elers, London	39 0 0
Bourne & Son, London	214 0 0
Clayton & Jowett, Liverpool	31 0 0
Crossley Brothers (Limited), London	15 0 0
Duckworth, —, Manchester	21 0 0
Glover & Co., London	56 0 0
Hays (Limited), Hull	87 0 0
Hayward-Tyler & Co.	15 0 0
Lyle & Sons, Tunbridge Wells	93 0 0
Montgomery & Co., Slough	45 0 0
Paget, —, Windsor	23 0 0
Pettitt, J., Windsor	70 0 0
Rylands, Dan (Limited), Barnsley	410 0 0
Shrimpton & Son, Windsor	30 0 0
Simpson & Son, Windsor	20 0 0
Startin & Co., London	20 0 0
Snuggs, —, Windsor	40 0 0
Twinch, J., Slough	52 0 0

Robertson, Donald William (and another), Pickering and Thornton Dale, surgeon. Trustees, Charles F. Lucy, Pickering, bank manager (and others). Dated, January 13; filed, January 18. Secured creditors, 290*l.* Liabilities unsecured, £4,967*l.* 13*s.*; estimated net assets, 545*l.* Composition of 5*s.* in the pound seemed to the extent of 4*s.* only by assignment, and one surety who covenants to pay to trustees the sum of 500*l.* by June 1 next, out of which a composition of 4*s.* in the pound is to be paid, two creditors postponing their claims. The debtor covenants to pay the trustees a sum sufficient to pay a composition of 1*s.* in the pound, except to the two before-mentioned creditors, by May 1, 1897. The following are scheduled as creditors:—

	£ s. d.
Arnoldale, David, Pickering	63 0 0
Bankers' claims	250 0 0
Barber, George, Pickering	20 0 0
Beal, George, Pickering	23 0 0
Bleasdale & Co. (Limited), York	25 0 0
Coverdale, H., jnn., Pickering	34 0 0
Craft, Marr & Co., Richmond	31 0 0
Cross, Matthew, Pickering	35 0 0
Dinsley, Edward, Pickering	55 0 0
English, A. E., Pickering	56 0 0
English, Ann, Pickering	47 0 0
Frank, Thomas, Pickering	111 0 0
Hackers, Edward H., Scarborough	50 0 0
Hawson Brothers, Pickering	110 0 0
Kirby & Nicholson, York	52 0 0
Pearson, H. W., Malton	100 0 0
Pickering Gas and Water Company (Limited)	
Pickering	29 0 0
Pickering, Henry, Thornton Dale	70 0 0
Pickering, William, Pickering	25 0 0
Robertson, Eliza V. A., Pickering	1,200 0 0
Robertson, George V. A., Pickering	1,200 0 0
Rose & Co., Malton	25 0 0
Rowntree & Co., Scarborough	67 0 0
Skaife, William, Pickering	90 0 0
Slinger & Son, York	49 0 0
Southall & Co., Birmingham	20 0 0
Sowersby, Mrs., Pickering	361 0 0
Whitfield, Jobu, Scarborough	46 0 0
Wood & Co., York	21 0 0
Young, Mrs., Pickering	200 0 0

Wilbraham, William Henry, Somercotes, chemist and druggist. Trustee, William Watson, Alfreton, accountant. Dated, January 9; filed, January 15. Unsecured liabilities, £242*l.* 9*s.* 10*d.* Estimated net assets, £111. 2*s.* 10*d.* The following are scheduled as creditors:—

	£ s. d.
Clark, B., Leeds	15 0 0
Crook, R., jnn., Liverpool	30 0 0
Dobb & Sons, Sheffield	16 0 0
Greaves, —, Alfreton	15 0 0
Horniman & Co., London	10 0 0
Kenyon, —, Alfreton	50 0 0
Maltby Brothers, Nottingham	16 0 0
Read & Jackson, Bristol	25 0 0
Storey, Witty & Co., Hnrl	10 0 0
Summer, R., & Co., Liverpool	19 0 0

Wills of Deceased Chemists.

The will of Mr. John Stanley Ormandy, chemist and druggist and town councillor, of Barrow-in-Furness, who died aged 54, on February 9, 1895, has been proved by Mr. William R. Ormandy, a brother, and Mr. Frank Taylor, solicitor, both of Barrow-in-Furness, the executors, by whom the testator's gross personality is sworn at 1,036*l.* 16*s.* 1*d.* the net value being 925*l.* 14*s.* 1*d.*

Letters of administration to the estate of Mr. James Wallwork Forbés, a well-known chemist and druggist, of Bolton, who met with his death from a fall downstairs on July 23, and who died intestate, have been granted to Mr. James Forbés, of 125 Clarence Street, Bolton, the son, his sureties being Mr. Edward Forbés, of 144 Derby Street, Bolton, chemist and druggist, and Mr. Jas. Hargreaves, of 74 Bridge Street, Bolton. The gross personality amounts to 650*l.* 12*s.* 5*d.*, and the net to 586*l.* 3*s.* 5*d.*

The will of Mr. Edward Thompson, retired chemist and druggist, of 72 Lofton Place, Leeds, who died on June 17, has been proved by Mr. Alfred T. Thompson, of Spencer Mount, Roundhay Road, chemist, and Mr. Edward Barrett Thompson, of 5 Archery Terrace, Blackman Lane, chemist, both of Leeds, the sons and executors of the testator, by whom the gross value of the personality is sworn at 3,639*l.* 7*s.* 3*d.*, and the net at 3,601*l.* 16*s.* 4*d.* There are no leaseholds.

Mr. Hugh W. Tulloch, chairman of Jeyses' Sanitary Fluid Company, having died intestate on July 24, letters of administration to his estate have been granted at the Principal Probate Registry to his sister, Miss Isabella Maynard Tulloch, of 29 Lancaster Road, Westbourne Grove, by whom the value of the deceased's personality is sworn at 5,486*l.* 5*s.* 3*d.*

The will of Mr. Chas. Jas. Fox, for many years a representative of Messrs. G. Atkinson & Co., who died on July 20, at his residence, Pelham Lodge, Ealing, has been proved by his brother, Mr. John H. Fox, 166 Stroud Green Road, power being reserved for Mrs. E. M. Fox, the widow, to prove hereafter. The testator's gross personality amounts to 1,324*l.* 5*s.* 2*d.*, and the net to 1,261*l.* 17*s.* 8*d.*

The will and codicil of Mr. Robert Owen Fitch, chemist and druggist, 255 Well Street, Hackney, who died on April 21, has been proved by Mrs. Gertrude W. Mitchell, the testator's daughter and sole executrix, by whom the gross personality is sworn at 1,083*l.* 19*s.* 11*d.*, the net value being 1,058*l.* 7*s.* 8*d.*

The will of Mr. Wm. Dyer, pharmaceutical chemist, of 1 Corn Market, Halifax, a leading local Wesleyan and director of many public companies, who died on March 4, 1895, at Halifax, has been proved in London by Mrs. Ellen Dyer, the widow, Mr. James Farrar, of Heatherlea, Halifax, architect, and Mr. George Aked Blackburn, of Northgate, in Halifax, the executors, by whom the gross value of the personality is sworn at 5,962*l.* 0*s.* 6*d.*, the net value being 4,683*l.* 0*s.* 4*d.*

The will and codicil of Mr. R. P. Chantler, London Road, Luton, chemist, who died on March 21, 1894, was proved on April 21, 1894, by Mrs. Emily Jane Chantler, the widow, and Mr. Wm. Rogers Chantler, Newport Pagnell, chemist, a brother of the deceased, the executors. The gross personality amounts to 3,097*l.* 6*s.* 5*d.*, and the net to 2,843*l.* 13*s.* 1*d.*

The will of the late Mr. Robert Foulds, chemist and druggist, of Liverpool, who died on June 21, has been proved by Mr. Robert Foulds, of 94 Pitt Street, Liverpool, chemist and druggist, the son, and Mr. John Ley, of 182 Upper Parliament Street, Liverpool, the executors, by whom the testator's gross personality is sworn at 2,145*l.* 12*s.* 10*d.*

The late Mr. Francis Dixon Fisher, J.P., pharmaceutical chemist, of Market Place, Grantham, of which town he was formerly Mayor, having died intestate on July 25, letters of administration to his estate have been granted to his widow, Mrs. Martha Elizabeth Fisher, her sureties being Mr. J. D. Fisher, of Lincoln, jeweller, and Mr. Jas. Wm. Fisher, of Wellingborough, architect. The personality of the deceased is sworn at 5,932*l.* 15*s.* 1*d.*

The will of the late Mr. John Howard, retired chemist and druggist, of 168 Millbrook Road, Freemantle, who died on September 21, 1893, has now, by the final decree of the President of the Probate Court, been pronounced valid, and probate thereof has been granted to Miss Esther Slater, of the Beeches, Mokberley, Cheshire, and Mr. Frank Horton, of the Beeches, aforesaid, farmer, the executors, by whom the value of the testator's personality is sworn at 10,242*l.* 4*s.* 2*d.*

Mr. Wm. Hy. Tugwell, pharmaceutical chemist, of 6 and 8 Lewisham Road, Greenwich, local secretary to the Pharmaceutical Society, who died on September 20, having omitted to name any executor to his will, letters of administration to his estate have been granted to his widow and residuary legatee, Mrs. Emma Tugwell, by whom the testator's gross personality is sworn at 364*l.* 14*s.* 4*d.*, the net value being 327*l.* 17*s.* 9*d.*

The will of Mr. Charles Hy. Coles, of Reading, chemist and druggist, who died on July 16, has been proved in London, by Miss Mercy Emily Coles, a daughter, and one of the executors, power to prove hereafter being reserved to Mr. Frederick Guillaume, the other executor. The personality amounts to 396*l.*

The will of Mr. Edwin A. Woodhouse, chemist and druggist, 8 Cleethorpe Road, Great Grimsby, who died on June 3, has been proved in London, by Mr. F. H. Atkinson, surgeon, and Mr. Robert Davis, engineer, both of Grimsby, the executors therein named. The value of the testator's personality was first sworn at 1,282*l.* 5*s.* 9*d.* gross and 1,253*l.* 17*s.* 10*d.* net, but was subsequently re-sworn at 1,005*l.* 0*s.* 3*d.*

The will of Mr. H. P. Foster, of 19 Lion Terrace and 153 Queen Street, Portsea, for sixteen years a member of the Portsmouth Town Council, who died on July 12, has been proved by Mrs. M. A. Foster, the testator's widow and sole executrix, by whom the gross value of the personality is sworn at 1,490*l.* 0*s.* 3*d.*, the net value being 1,392*l.* 2*s.* 3*d.* There is no leasehold property.

The will of Mr. Thos. Willsdon Spong, who for forty years carried on business as a chemist and druggist at Biggleswade, and who died on June 27, aged 85 years, has been proved in London by Miss Ellen Spong, of Holly Lodge, Wood Green, the daughter; Mr. Douglas M. Spong, chemist and druggist, of Biggleswade, the son; and the Rev. A. D. Spong, of West Brighton, Congregational minister, the nephew; by whom the gross personality is sworn at 11,506*l.* 7*s.* 5*d.*, and the net at 11,326*l.* 18*s.* 2*d.*

Mr. C. T. Pearson, of 104 Stamford Street, chemist and druggist, having died on March 7 intestate, unmarried, and without surviving parent, letters of administration to his estate have been granted to his brother, Mr. Thos. Josiah Pearson, of Hadley Green, by whom the personality of the deceased is sworn at 4,841*l.* 16*s.* 8*d.*

The will of the late Mr. John Manfull, chemist and druggist, of Nottingham, has been proved by Mr. William Frederick Grundy, of Walker Street, gentleman, the executor, by whom the testator's personality is sworn at 430*l.* 4*s.* 3*d.*

The will of Mr. Arthur Norweb, chemist and druggist, of 26 Fishergate, Nottingham, who died very suddenly on August 24, has been proved by Mr. John Jas. Norweb, of 5 Broad Oak Street, the father, and Mr. E. W. Goddard, chemist and druggist, of 3 Thoresby Street, both of Nottingham, the surviving executors, by whom the testator's gross personality is sworn at 465*l.* 4*s.* 11*d.*, and net at 383*l.* 15*s.* 3*d.*

The will of Mr. Thomas Dixon, a much-respected chemist and druggist, of Rickmansworth, who died on September 6, has been proved in London by Mrs. S. T. Dixon, of Hillsborough, Gravelly Hill, Aston; Mr. Wm. Hy. Swannell, of Rickmansworth; and Mr. Henry Lomas, of Rickmansworth, the executors, by whom the testator's gross personality is sworn at 1,766*l.* 9*s.* 6*d.*, and net at 1,562*l.* 0*s.* 9*d.*

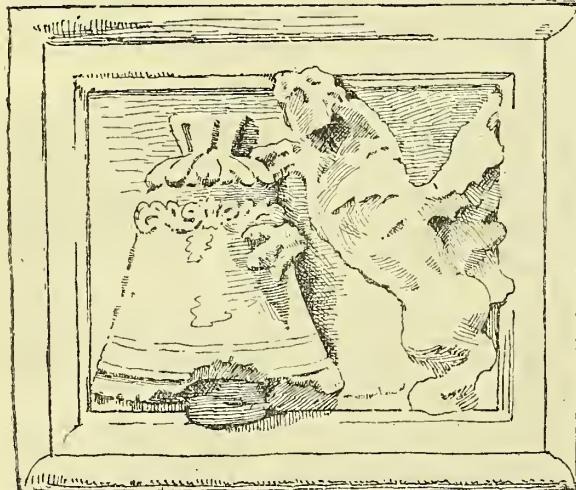
Mr. I. B. Ginner, of the Pharmacis Gras, Cannes, the oldest and one of the best-known English chemists and druggists on the Riviera, having died intestate on September 13, at Saint Dalmas, letters of administration to his estate have been granted to his widow, Mrs. Lydia Adeline Ginner, her surety being Mr. William Wightman, of Rosedene, Nightingale Lane, Balham. The value of the testator's personality in England is sworn at 30*l.* 4*s.* 9*d.*

A Chapter of Drug History.

"THE big business-premises of Corbyn, Stacey & Co., at 300 High Holborn, were in a state of transition when I visited them a few days ago," writes our representative. "The last of the firm's retail businesses, which has been carried on at that address for generations, has been closed, and its space appropriated to the ever-growing needs of the wholesale branch. The former general office of the firm has been converted into a warehouse, and the shop is now in process of transformation into a town-order counter. While I looked around, admiring the methodical manner in which the alterations were being carried out amid the unbroken activity of the daily trade of the wholesale department, Mr. Henry Stacey gave me an interesting sketch of the history of the firm, which, as everyone knows, is one of the oldest in the country."

THE OLD "BELL AND DRAGON."

"In closing the last of our three shops," said Mr. Stacey, "we are reverting to our original condition, for Corbyn's house was started as a wholesale druggist's, and the retail branches are but infant offshoots—reckoning time by the measure of our own antiquity. Our City foothold in the retail trade was acquired in my grandfather's time, when we purchased the pharmacy of Winstanley & Son, in Poultry. Along with that shop we bought that of George Butler in Cheapside, and amalgamated the two. That was



about fifty years ago. And now comes a strange coincidence. In 1866 we rebuilt the Poultry shop, and from the foundations of the house was brought to light an old apothecary's sign, representing the Bell and Dragon, which must have lain there for a couple of hundred years at least, and bears distinct traces of damage by fire. Our theory is that a druggist's shop stood on this same site at the time of the Great Fire of London, in 1666, but the peculiar point is that long before the recovery of the sign we had adopted the 'Bell and Dragon' as the trade-mark of our house. There is the beast," continued Mr. Stacey, pointing to a slab standing in a corner of the warehouse, and recently put in an oak frame.

"Was the Poultry shop your oldest retail business?"

"Oh, no! We started here in Holborn, considerably over a century ago. Mr. Thomas Corbyn, who was then the head of our firm, joined his business with that of one Morris Clutton, a kind of apothecary who had a 'doctor's shop' in Holborn, and has been handed down to posterity as the originator of 'Clutton's febrifuge.' We have, among our papers, several books of Clutton & Corbyn, also of Corbyn & Clutton, as the firm became afterwards. One is a stock-book, taken at the death of Morris Clutton, in January, 1755. Clutton's shop was the precursor of our Holborn retail branch. The

Bond Street branch is the youngest of all. We bought that shop from a Mr. Bucklee, successor to Walduck, of 'Tarazacum' fame, and at the same time we absorbed Taylor, of Vere Street. As you may have heard, we are just about to transfer our last shop, and again take our position in the ranks of wholesale and manufacturing druggists pure and simple."

THE ORIGIN OF THE FIRM.

To my question whether the history of the firm could be traced back to its origin, Mr. Stacey replied in the negative; but the records of the house go back so far that the business-lineage may almost be said to be lost in the mists of antiquity; in fact, the only drug-firm known to be older than that of Corbyn, Stacey & Co. is that of Horner & Sons, which is believed to have been alluded to by Shakespeare in a reference to the drugs of Bucklersbury in one of his plays. The authenticated history of the Holborn house begins in the declining years of the seventeenth century with a business-firm trading mainly with the West Indies. An apothecary's business was added to this a little later on, and the trade then passed to one Thomas Corbyn, whose reign in the firm's history corresponds with the "spacious times of great Elizabeth" in that of England. Thomas Corbyn, as is shown by various documents he has left behind, was a remarkable man, and an excellent one withal. He was a Quaker, like so many other prominent druggists of his generation, and at one time, on the introduction of another Friend, John Smith, the founder of Dimsdale's Bank, he took Smith's cousin, George Stacey, who came from Alton, in Hampshire, to serve his apprenticeship to the drug-trade. Young Stacey came in the second half of Thomas Corbyn's reign, for we have evidence that the last-named was at the head of affairs before 1741, and in Corbyn's parchment-covered wages-book, which is still preserved at 300 High Holborn, there occur the following entries:—"Geo Stacey enter'd 3 mo 1772 at £25 (a year)"; and again, "Geo Stacey 1 mo 1778 Agreed to give £100 p. an." In 1780 this Geo. Stacey, who was also a Quaker, and the great-grandfather of the present junior partners, was made a member of the firm, but for some years his name did not appear in its style, for the firm's records contain a catalogue of "Chemical and Galenical Medicines | Truly Prepared & Sold with | all Sorts of | Drugs | by | Thomas Corbyn & Co | chemists & druggists | At the Bell & Dragon | in Holborn | London | 1 Month 1st 1789." There has thus been an unbroken line of four generations of Staceys in the business, the present partners in the firm being Mr. Samuel Lloyd Stacey, J.P., and his sons Hy. George Stacey, pharmaceutical chemist, and Wilson Stacey, chemist and druggist.* The spirit of the Society of Friends still survives, and the junior partners were brought up as Friends, although they have now ceased to be members of that body. The Corbys went out with the John Corbyn, the son of Thomas, but there are certain gaps in the records—a pity in such an historic house. The Quaker spirit, it seems, was adverse to the keeping of family records, which were looked upon as tending towards the cultivation of pride, though, perhaps, as Mr. Henry Stacey aptly remarked, "the pride of being without pride" is not the least haughty of the varieties.

MORTARS, CHINA, AND OTHER RELICS.

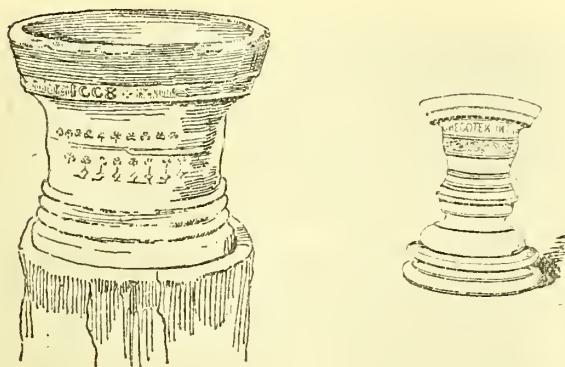
From the warehouse on the ground floor, where most of the conversation above recorded had taken place, we went to the old private office of the head of the firm on the first floor, but not until I had been bidden to note a curious bell-metal mortar, 238 years old, which is still in daily use and, though wrinkled and dented with age, is as sound as when first made by Richard Richmond in the year of grace 1658. A much smaller but still older mortar is kept in honourable superannuation at the City offices of the firm. It bears no owner's or caster's name, but has the inscription

"IC BEN GHEGOTEN INT IAER ONS HEREN MCCCCXXXVI."

* Portraits of two of these gentlemen appear in our group of members of the Wholesale Drug-trade of London.

("I was cast in the year of our-Lord 1536.") Its history cannot be traced, but it may well have come to this country among the worldly goods of one of the many Dutch and

others evidently very old. Their investigation would probably prove a thankful task for a pharmacognosist interested in the history of drugs. The cabinet is known to date from before 1725.



Flemish artisans who flocked into England and settled in the Eastern counties in the second half of the sixteenth century.

Part of the big building in Holborn is furnished as a dwelling-house, for, while the retail business was carried on there, assistants lived on the premises. The house is appointed in the comfortable, old-fashioned style of what has been designated as the "Mahogany Age," and a door with the words "Mr. Stacey" admits to the former private room of the senior partner. The chief reason of my visit to this room was to see some rare Spode syrup-jars and ointment-pots, of white china ornamented with blue flowers, which are among the most valuable of the many pharmacy relics in the firm's possession. One of each kind is represented below, and it will interest the devotees of blue-and-



white china to know that altogether there are twenty ointment-pots and twenty-seven syrup-jars. It would naturally be supposed that, on account of their exceeding scarcity, the vessels "clay with long oblivion had gone dry"; but it is a fact that, until last month, they were all in daily use in the shop, probably constituting the most valuable set of its kind in use in any British pharmacy. The Messrs. Stacey have been offered as much as 5 guineas apiece for the articles, but it is scarcely necessary to say that, as heirlooms of the firm, the china is not for sale. The name "SPODE" is printed in small capital letters on each piece, and the principal value of the pots lies in the fact that scarcely any specimens of the famous potter's ware bearing this identical trade-mark are extant. Mr. Henry Stacey, who is a devotee of the china-cult, informed me that the pots date from the first decade of the century. While thus "I stood, surrounded by the shapes of clay"—if one may quote Omar in connection with apothecaries' ointment-jars—Mr. Henry Stacey diverted my attention to an antique *materia-medica* cabinet of inlaid mahogany—a fine example of the unsurpassed craftsmanship that, many years ago, made "English" and "first-class" controversial terms of praise all over the world. The cabinet stands about 5½ feet high, and contains two sets of large drawers, labelled respectively "Animal," "Part Anim.," "Semina," "Fructus," "Succ., &c.," "Gummi," "Ligna," "Radices," "Mineral, &c.," and "Metal, &c." The drawers are full of specimens, some comparatively recent,

THE AMERICAN DRUG-TRADE 150 YEARS AGO.

In the meantime Mr. W. Stacey had spread out on the table a quantity of old stock, recipe, account, and letter books relating to the firm's transactions a century and a half ago, which, I trust, will some day, with the other relics, be collected into a private museum of this historic drug-house. I subsequently spent a couple of happy hours over some of these quaint and curious volumes of forgotten lore at the City office of the firm, in company with Mr. Henry Wheeler, the manager of Corby, Stacey & Co.'s export department, who pointed out to me, with excusable pride, how, in 1741, the excellent Thos. Corby worked up a big export trade with what is now the United States. No adequate idea of the interest of these old books can be conveyed in a short sketch like the present, but a few extracts will show what manner of man was this honest, God-fearing, intelligent Quaker, and how every page of the big folio, in which laboriously he copied his business letters in neat calligraphy, bears the imprint of his vigorous mind and homely, eloquent, Anglo-Saxon speech.

THOMAS CORBYN'S LETTER-BOOK

contains only letters sent by him to "America," i.e. the colonies of Virginia, Maryland, Pennsylvania, &c. It runs from 1741 to 1755. It begins with the following missive dated "London 12 m 12 1741":—

Love Fr^d Jn^e Pleasant

Intending to send some Druggs to Virginia, was advised by my Dr & Fr^d & neibour Jn^e Hunt to consign them to Thee for sales & returns, likewise by Jn^e Hanbury.

They are good & efficacious of their kind, charg'd at a small advance hope will bring double Sterling, but Persons wants & markets price must be Thy rule—both for Druggs Chest & Boxes, rather than should lye long on hand, may sell as charg'd in y^e Invoice. . . .

As I apprehend y^e profit will pretty much consist in a proper manner of disposing of them have put them up in small separet quautity, ye Bark (w^{ch} is y^e princiial article,) in boxes $\frac{1}{12}$ in each ye Rhubarb in 8 boxes $\frac{1}{12}$ in each, that may more readily suit Physical Practitioners, or Planters being common things, ye use much known likewise that may if occasion send them up y^e country, & not clog any other Place but as this will be an extraordinary trouble, am willing to allow it in Commission.

Please to mak remittance by Bill of exchange only & denote particular amt of sales—w^{ch} will oblige Thy Fr^d unknown

THO^s CORBYN.

P.S. I have put some Cinnamon & a small piece of Rhubarb at top of Chest, in blue Paper, w^{ch} please to accept of for Family use.

Direct for Me to be left at Jn^e Hanburys London

Sent in y^e Ursula Capt Hunter for Virginia w y^e Goods.

SNAKE-ROOT AND THE CALENDAR.

Thomas Corby was not a man who did things by halves. Simultaneously with the shipment to Friend John Pleasant, he made consignments to his "Love Fr^d Sam" Sansom," in the Quaker city of Philadelphia, and to various other correspondents in New England settlements, as well as in Barbados and other West Indian islands, which were then at the height of their prosperity, and had been finally incorporated into the British Dominions. Thomas Corby's American ventures prospered, and ere long we find him importing American drugs into Britain. The first article concerning which he inquires is "Rattle-snake root," of which he sent a sample to match, "desiring Thee to send me some of same 100 lts. or my Chest full if not above 6d. p lb., but would have some let it be what price it may. Wee are told y^e seneca sort is best, suppose from Senock." His correspondent is assured that he can rely upon the writer's integrity. "Tho I am a stranger to Thee thou need not fear sending it." It is interesting to note that the first reference to seneca-root in England was in 1704, by Ray, who called it *Plantula marilandica*, but not until 1735 did it acquire a reputation as a remedy against pleurisy and peri-pneumonia. Corby, therefore, was probably among its earliest importers. The name "Seneca" was derived from the Seneca tribe of Indians, one of the "Five Nations" of the Iroquois of Fenimore-Cooper renown. They used it against

rattle-snake bite. Another point may be mentioned in connection with Thos. Corby's letter-book—viz., that in 1741 he dates a number of letters from the "first month call'd March," at the end of the book he writes of the "first month now call'd January." The explanation, of course, is that the Julian style was abandoned in Great Britain, and the Gregorian style introduced, on September 3, 1752, that day being legally reckoned the 14th, and the succeeding year beginning with January 1 instead of March 25, which previously had been legally accounted New Year's Day, notwithstanding that Julius Caesar had made January the first month.

THE "GOODNESS OF THE COMPOSITIONS."

Thomas Corby was a staunch upholder of the purity of drugs, and through his American letter-book are scattered numerous references to the increased "profits" he could, an' he would, make were he to adulterate his wares. Witness the following to "Dear Fr^ds J^{no} & Esther White," dated "7th January, 1746/47":—

The simple drugs are ye best of their kind, and ye composition not only true, but curiously prepared, and charg'd reasonable according to ye present market price. Perhaps some will say ye compositions are too dear, thou must insist on their goodness. I know there are a great many very bad & adulterated medicines sent to America, w^{ch} are sold cheap, but have much larger profit than those who are conscientious in preparing them true, according to ye London dispensatory set forth by ye College of Phisitions. . . . I've not sent any Jesuit's Bark in ye Quill, Oyle of Cloves nor salt of Amb^r w^{ch} Articles C M^l has an over stock of me & will spare ye some.

I have likewise sent thee on comission some cloaks, stays & Flower of Mustard pray take out ye stays & cloaks & air y^m least shou'd be mildew'd, I cant direct thee in ye sale.

And in another place—

My Fr^d to use thy own Language & speak plainly if I did not act upon a conscientious bottom thy Method would put me upou making Reprisals, viz'd by sending thee adulterat'd med^{cs} which Thou nor any Apoth^y should be able to find out, tho' the poor Patient would suffer. For instance Salt of Vipers, no man can make True from Viper's Flesh only to sell under 16/ p oz yet it's impossible to distinguish it from Salt of Hartshorn or any other Animal Salt & the like in many other things too tedious to mention & not so easy to Demonstrate to thee in writing as if present. . . .

THOMAS CORBYN ADMONISHING CORRESPONDENTS.

Even among Quakers—and nearly all Thomas Corby's correspondents belonged to that persuasion—there were occasional money troubles. One of the correspondents, Greenleaf, bearing an honoured New England Quaker name, did not settle his accounts as promptly as he should have done, and this is how Thomas Corby writes about him to a third person:—

We esteem it little better than Robbery for a Factor to use monys w^{ch} receiv'd instead of remitting or answering the Owners Draughts, but much worse w^{ch} they break and never pay—But as this is not the case with Jno but he has Sufficient Effects it must be want of an honest Principle w^{ch} I think merits the notice of a Religious Professing People, and altho' it may not now be regular (because it's settled) to lay it before the meeting, Yet I desire thou wilt show this Letter to some of the Elders that they may advise him.—

Mr. Greenleaf's erstwhile status of "Loving Fr^d" dwindles down to "Fr^d" as the correspondence proceeds, and, finally, we come to the plain-spoken sentence—

My Fr^d if we have not Punctual Remittances we can't supply thy orders.

Esther White, too, occasionally lapsed from the straight path of finance. Moreover, she is reproved in one of the letters for having become "puffed up with Pride," and suitably admonished. This is a specimen of the style in which Thomas Corby rebuked his Friend Esther White:—

And indeed my Fr^d the very stile of thy Letters savours too much of being a little lifted up, don't forget thy beginning nor who were thy first Helpers in Trade, by the General Aet sent in 7^{mo} 1750 there are many Hundred Pounds in your Hands, pray look it over & give me a particular answer to it—I own tho' (I don't love Money) yet it affects me very much I am so requited for so kind an intention & such things will shut me up from such Hospitable & Kind Aets.

Alas for Esther! As Wordsworth, I think, said of another Esther, "Her parents held the Quaker rule, which does the worldly spirit cool; but she was trained in Nature's School;

Nature had blessed her." Time forbade me to trace the ending of the affairs with Esther White, and we will leave her in the hope that she profited by Thomas Corby's dignified and gentle rebuke.

HIS PERSONAL RELATIONS.

About 1752 Thomas Corby married, concerning which event he writes to a business friend:—

"I was engaged in a weighty Affair, viz^t of marriage, which now thro' Mercy (I hope) happily accomplish'd. I know not whether Thou mayst remember the Person, Sarah Garret of Colchester, sister to Eliz. Kendall."

A cousin of Thomas, one John Corby, M.D., settled in New England about this time, and a correspondence is kept up with him also, as the following excerpt from a letter dated October 10, 1754, shows:—

"I don't know anything particularly new & valuable in Physick. My wife has brt me a new girl now abt 6 weeks old and thrives well she joyns me in kind love and wish thee success to get an Estate and spend it in old England."

We will conclude with one abstract of a letter written to an American correspondent in 1750, showing that "trade depression" and "unfair competition" were as chronic complaints 150 years ago as they are to-day, although Thomas Corby refused to bow the knee to the Baal of adulteration:—

f. 23

What compositions thou hast from us (he writes in a letter to C. Marshall) thou may depend on being faithful & I do assure thee this is a trying time for Faithfulness in our Trade, because of so great an advance in the price of Drugs in genera that our profit in compounds is very much lessn'd as well as the same in Drugs themselves, instead of their being at a more reasonable Price since the cessation of War, they are at this time Abundance of 'em much higher.

A characteristic story of Thomas Corby is told in a newspaper cutting of the same period preserved among the relics, giving an account of the "holding-up" (although that Americanism is not used) of the stage-coach by robbers near Hammersmith. One of the passengers was Thomas Corby, "the well-known Quaker druggist." After relieving all the other passengers of their valuables the freebooters made off without having noticed Corby, who had sat in contemplative silence in his corner. As the last of the thieves left, Corby called out, "Friend, thou hast forgotten to take mine," at the same time handing his purse. He would not suffer himself to be treated differently from his fellow-passengers. A Spanish or Italian brigand might have had sufficient sense of the picturesqueness of the situation to have returned the professed purse with a courtly bow. Unfortunately, the record does not say what the Hammersmith bandit did under the circumstances.

There are no doubt some American drug-firms carrying on business to-day whose ancestors traded with Thomas Corby, and it would be interesting if these could trace that relationship in their business-records. For Corby's lines were cast in stirring times—when British folk only peopled that strip of the United States which runs southwards from Maine to Florida; when Florida itself was still Spanish; and when behind the British settlements from Canada to New Orleans, stretched an unbroken vastness of territory claimed by the French, and behind that a wilderness unknown. And Corby's letters bristle with allusions to the wars in which figured Montcalm, Braddock, and Wolfe, and which ended in the loss to the French Crown of all North America, excepting, for a short time, Louisiana.

AN old dame came in and asked for tooth-powder, and I, seeing no appearance of teeth, glance at her mouth while she is speaking. She was quick, though, and noticed my look. "Ye needna look," says she. "I ha'e but ae tooth, and I wouldna like to pairt wi' it. It's true I canna chew, but it grips till I can tear aff a bite. Losh help me if I lose it!"

ECONOMICAL CUSTOMER—"A bottle of Mother Sledger's seerup—quick, for I'm in a hurry. How much?" I tell her. "Mercy! I'll not take it—I only pay 9 $\frac{1}{2}$ d. for it at the store. Cheatin' folks that way!" I tell her that the stores price is the same as mine. But it's no use. She departs, to return again in an hour, saying she would take it. "It wass Beechman's Pills I was thinking of," she says.

The Delivery of Goods.

UNDER the Sale of Goods Act, which codifies the existing law, the seller is bound to deliver the goods, and the buyer to accept and pay for them, in accordance with the terms of the contract. If the seller engages to deliver the article sold at a given place, the contract is not fulfilled until he has done so, unless there is an agreement that, in the meantime, the thing shall be at the risk of the buyer. Under a contract of sale, the buyer acquires a right of property in the goods sold to him, but he has no right of possession until he pays or tenders the price. Where a buyer refuses to accept or pay for the goods, the seller can bring an action against him for damages for breach of contract, and the fact of his having resold the goods will not affect his right to do so if he has lost by the transaction. Payment and delivery are concurrent conditions, unless there is an agreement to the contrary between buyer and seller, and the one must give possession of the goods for the price, and the other pay the price for their possession at the same time. Where the place of delivery is not settled by the contract of sale, either expressly or by implication, it is understood to be at the seller's place of business, and if he should not have one, at his residence. But if the contract is for the sale of specific goods, which, at the time of making it, the buyer and seller know to be at some other place, then such place is the place of delivery. Where goods sold are in the custody of a third party, there is no delivery of them by the seller until the third party informs the buyer that he holds the goods on his behalf. If a vendor agrees to send the goods to the buyer, and no time is fixed, he is bound to send them within a reasonable time. A demand or tender of delivery must be made at a reasonable hour, otherwise it will have no effect whatever. And what is a reasonable time or reasonable hour is to be a question of fact. When a tender of goods has to be made at a particular place, and the buyer is bound to be there, it must be made by daylight at a convenient time before sunset. But if his presence is not required, it may be made after dark.

If the whole quantity of goods contracted for is not delivered to a buyer, he may reject the goods offered; but if he accepts them, he must pay for them at the contract rate. Where more goods are delivered than the seller contracted to sell, the buyer has the option of rejecting the whole, or keeping those included in the contract and rejecting the rest, or of accepting the whole, in which case he must pay for them at the contract rate. Buyers cannot be called upon to accept either a greater or less quantity of an article than the amount specified in the contract. Where goods delivered are mixed, only a part being of the description ordered, the buyer may either reject the whole, or accept the right goods and reject the others. Except by agreement, a buyer is not bound to accept the delivery of goods by instalments. Under a contract for sale by instalments, which are to be paid for separately, if the seller makes a defective delivery, the question whether the buyer can repudiate the whole contract, or merely claim compensation for the breach thereof, will depend upon the terms of the contract, and the actual circumstances of each case. If a buyer refuse to accept delivery, or to pay for the instalment, the seller has the same remedies against the buyer as the latter has against him in the previous contingency, and the same difficulty arises as to which one he is entitled to take, and it must be determined in the same manner.

Where the seller is authorised or required by the contract of sale to send the goods to the buyer, delivery of them to a carrier for that purpose is *prima facie* held to be delivery to him. As a general rule, the property in the goods then passes to the buyer, and the goods are at his risk. But, whether the transit is by land or sea, the seller is bound to execute due care and diligence in securing the responsibility of the carrier for the safe delivery of the goods, so that, in the case of loss or damage, the buyer may have his remedy against the carrier. Should the seller neglect to do this, and the goods are lost or damaged in transit, the buyer may refuse to treat the delivery to the carrier as a delivery to himself, or he may hold the seller responsible in damages. If goods are sent by sea under circumstances in which it is

the custom to insure, and the seller fails to give the buyer such notice as will enable him to insure them, the goods will be at his risk during the sea transit. Where a buyer has not previously examined the goods delivered to him, he will not be held to have accepted them until he has had a reasonable opportunity of ascertaining that they are according to contract. Before paying for goods, a buyer is entitled to see that he really has the things he bargained for, but after he has accepted them he cannot rescind the contract.—*Kemp's Mercantile Gazette*.

Sponge-fishing in the Bahamas.

FROM 5,000 to 6,000 persons are engaged in gathering sponges for the market in the Bahamas, nearly all these collectors being coloured people. Hands employed in clipping, washing, packing, and preparing sponges for export earn from 2s. to 3s. per day of ten hours. The pay of the fishermen depends upon the number of sponges found. The owner of the vessel fits her out at his own expense, and the profits of the voyage are divided in shares among the owner, the master, and the men. By using a water-glass the fisherman can easily discover the sponges at the bottom, and, having sighted a promising lot, he fishes up the best ones with pole and hook, leaving the smaller ones untouched. Sometimes the sponges adhere firmly to the bed of the sea; sometimes they are not attached at all, the latter being known as "rollers." When a sponge field is reached the vessel anchors, and the men put off in small boats for fishing.

When brought on board the sponges are at once spread out on the deck and left exposed to the sun for several days, to kill the animal matter that covers the sponge. The vessels visit their "kraal" once a week to land the load from the deck. This kraal is a pen, fenced in by sticks of wood so as to allow a free circulation of water. It is usually built in a sheltered and shallow bay or cove on one of the cays or reefs. Here the sponges are soaked and washed by the action of the water from four to six days; they are then taken out and beaten with sticks, until the decayed covering is entirely removed and the sponge is quite clean, when they are conveyed to the market of Nassau in the Bahamas.

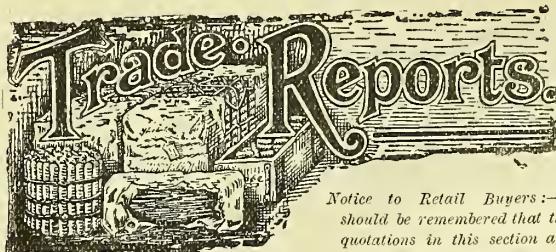
The cargoes vary greatly in size and value. Of the larger sponges a catch of 5,000, or of the smaller ones of 7,500, is considered a fair one; occasionally, however, a cargo of from 12,000 to 15,000 large sponges is brought in. The vessels are usually fitted out for a six weeks' trip, and make seven or eight voyages yearly. There is no particular season for sponge-gathering, but quiet weather greatly favours the chances of a good catch, as nearly all the work is done in small open boats from 10 to 12 feet long.

The average prices for which sponges sell in the local market are as follows:—Sheep's wool (first quality), 4s. 9½d. per lb.; velvet, 3s.; reef, 2s. 8½d.; hard head, 1s. 8d.; grass, 1s. 6d.; and yellow, 1s. 3d. per lb. The quantity shipped to the United States in 1893 was 708,000 lbs. to Great Britain 107,000 lbs., to France 50,000 lbs., to Holland and Germany combined 50,000 lbs. Bahama sponges are not considered first class, but a ready market is found for all that can be obtained, and the prices keep steady.

To fit them for export the sponges are cut and trimmed, and again thoroughly washed and dried; next they are assorted, according to varieties and grades, and then packed by means of hand-presses into bales weighing from 20 to 150 lbs.

At Nassau there is a sponge exchange, where sales take place five days every week. The cargoes are landed here from the vessels, and each cargo is piled up by itself, the weight being unknown. The buyers examine the lots for sale, and each man hands in a private tender, in writing, for the lot, which, on opening the tenders, is awarded to the highest bidder. A successful buyer must be able to judge correctly by his eye and experience how many pounds of good sponges he will be able to get out of a given lot when it has been carefully worked up.

Most of the sponges sold at Nassau are bought by resident agents, who act for London, New York, Paris, and Berlin houses. A few merchants handle sponges on their own account.



Notice to Retail Buyers:—I should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large

quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable even for manufacturing purposes. Further points which should be borne in mind are that distributor generally has to bear the bulk of the freight-charges on the goods on their way from the producer to the retailer, and that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., January 22.

OWING to technical reasons connected with the publication of the present issue, we have to close our market report, so far as this section is concerned, on Wednesday night. An account of Thursday's drug-sales (which promise to be rather light for this time of the year), and of the general market changes between Wednesday and Thursday night, will be found in the orange-coloured supplement. The markets have generally been extremely quiet this week, and there are few changes in the drug and chemical markets. Essential oils are unaltered, with the exception of Italian essences, which are moving upward. Crude camphor is much lower, arsenic very dear and almost unobtainable. Cream of tartar has advanced, and tartaric acid is firm. Quinine steady. Cod-liver oil firm. Persian opium slightly easier. In several spices a slight movement upwards has occurred. This is notably the case with pimento and pepper, although both close rather quiet. A fair trade has also been done in Zanzibar cloves, while capsicums, mace, nutmegs, and canary-seed are lower. Drysalteries have been somewhat quiet, with the exception of shellac, which shows a firmer tone, and of galls, which are extremely firm for Persian and slightly higher for Chinese and Japanese. In oils the chief alterations since last Thursday are as follows:—Linseed oil is higher at 19s. 9d. to 20s. 3d. on the spot. Rape oil 6d. to 1s. dearer at 24s. for crude, and 25s. 6d. for refined. Cotton-seed oil also considerably higher at 15s. for crude and 17s. 6d. for refined. Cochin cocoanut oil has advanced to 20s. 6d.; Ceylon remains unchanged. Lagos palm oil 6d. dearer at 22s. 6d. Olive oil unaltered. Turpentine a point lower at 21s. for American; and petroleum decidedly easier at 6 $\frac{1}{4}$ d. to 7 $\frac{1}{4}$ d. for American, according to brand, and 6 $\frac{1}{2}$ d. to 6 $\frac{3}{4}$ d. per gallon for Russian. The Bank rate is unchanged at 2 per cent., and bar silver is slightly easier at 30 $\frac{1}{2}$ d. per oz.

Mr. Charles Umney writes, referring to the remarks upon East Indian jalap in a recent issue, that he finds, upon reference to the catalogues of the drug-auctions East Indian at the end of the year 1894, that East Indian jalap was offered in public sale, and was sold at 2d. per lb., notwithstanding the market price was at that time about 1s. 5d. per lb. for Vera Cruz jalap. Mr. Umney bought the particular parcel of jalap referred to, for the production of jalapin, and bears out Mr. Hooper's statement as to the percentage of resin in the jalap, an assay made prior to the purchase of the drug showing it to contain 12.5 per cent. of resin. Mr. Umney adds that if those firms who export drugs to England continue, as in the past, to give brokers a free hand in selling their goods, without having the value

analytically determined prior to the sale, they must expect that at times the goods will not realise such prices as the quality warrants. This is especially so when the appearance of the drug is different from the kind generally met with in commerce. Possibly this latter reason is the cause of the difference in the price of the jalap in question, inasmuch as, while the Vera Cruz jalap is generally met with in whole tubers, the Indian parcel in question was in thin slices, about the size and thickness of calumba. There seems to be no reason why jalap equal or superior to that now exported from Vera Cruz should not be grown in the Nilgiris and other districts in India.

ACID ACETIC.—Quiet at unchanged prices: 14s. 3d. for 30 per cent., 35s. 3d. for 90 per cent. and 38s. 9d. for glacial 98 per cent. to 100 per cent., all ex wharf in London.

ACID (CITRIC).—Shows no alteration; from 1s. 2d. to 1s. 2 $\frac{1}{2}$ d. is the price, according to holder. Concentrated Lemon-juice is still quoted at 13s. 15s., f.o.b., per pipe.

ACID (TARTARIC) is exceedingly firmly held and likely to go higher. English is held by the manufacturers at 1s. 3d. per lb., being the same quotation as that given by us last week; but for foreign, from 1s. 2 $\frac{1}{2}$ d. to 1s. 2 $\frac{3}{4}$ d. per lb. is now required.

ALCOHOL.—German potato spirit offers at from 5 $\frac{3}{4}$ d. to 6 $\frac{1}{2}$ d. per proof gallon according to brand, f.o.b. continental ports, packages not excluded.

ARECA-NUTS have been selling slowly privately at the rate of 12s. per cwt. for fair East Indian.

ARSENIC.—Good white powder is almost unobtainable on the spot. Sales have been made this week at 18s. per ton, and that is still the nominal spot quotation, but practically nothing is available. Considerable sales have been made lately America. For Lump, 28s. per ton is the quotation. There seems to be no prospect that the scarcity will last beyond the end of March.

BALSAM CANADA is quoted at slightly lower prices—viz. at from 1s. 2d. c.i.f. for 3 cwt. casks to 1s. 3 $\frac{1}{2}$ d. for good clear balsam in cases on the spot.

BALSAM TOLU.—Rather easier in America, where there have recently been several arrivals: 2s. 3d. per lb. is the nominal quotation.

BAYBERRY-BARK.—The price of this drug has risen very considerably. As a rule, it is obtainable at about 2 $\frac{1}{2}$ d. per lb., but reports from New York state that sales have been made there at 6d. per lb., and at present 8 $\frac{1}{2}$ d. per lb., c.i.f. terms, seems to be the lowest quotation. The season has just commenced.

BORAX.—Unchanged. Crystals may be had at 19s. 6d.; Powder at 20s. 6d. per cwt.; while the prices of Boracic acid are 29s. 6d. for Crystals and 31s. 6d. for Powder.

CAMPHOR (CRUDE).—A few hundred piculs have been sold at much lower prices—viz. from 160s. to 162s. 6d. per cwt. c.i.f. for Formosa, January-March steamer, and there are further sellers to-day for earlier shipment, as well as at 182s. 6d., c.i.f. November-December, for Japan. The market is weak, and the Syndicate are thought not to be operating at present.

CAMPHOR (REFINED).—Nominally the makers' prices are unchanged, but if the weakness in the crude article should continue it is not unlikely that refined may follow suit.

CANARY-SEED is lower: 197 bags of fine Spanish sold at to-day's spice-auctions at 47s. per quarter.

CASCARA SAGRADA.—Still scarce and dear. Good two years' old bark is quoted from New York at 22s. 6d. per cwt., c.i.f. terms.

CINCHONA.—The detailed reports of the Amsterdam cinchona auctions of last Thursday show that the richest parcel of bark offered was one consisting of 29 bales of *Ledgeriana* dust, containing 11.29 per cent. of Sulphate of Quinine. There was a slightly better demand all round for pharmaceutical barks, and good parcels realised high prices.

COLOCYNTH.—There are still a few packages of fine Syrian to be had at 2s. 6d. per lb., but the chief holders require 3s., and will not sell below.

COPPER SULPHATE.—The *Macclesfield* brand (98 per cent. to 99 per cent.) offers at 15*l.* 10*s.* per ton, f.o.b. Liverpool. *Anchor* brand is quoted at 15*l.* 15*s.* in London; *Mint*, at 15*l.* Other brands between those quotations.

CREAM OF TARTAR again considerably dearer, to-day's quotations for best white crystals, being 10*s.* per cwt., while powder has been raised to 10*7s.* 6*d.*; the last quotation from *Bordeaux* was 10*s.* f.o.b., and it is not likely that that would now be accepted. The price is again practically up to the highest level of a few months ago.

CROTON-SEED remains exceedingly scarce: the nominal price is about 50*s.* per cwt. for good quality, but none is offering.

GENTIAN-ROOT.—Sales have been made this week at the rate of 21*s.* per cwt., and from 22*s.* to 22*s.* 6*d.* is now required.

GLYCERINE.—Barely steady. The manufacturers' quotations for *English* and *German* double-distilled B.P. quality are unaltered, but second-hand holders are prepared to make some slight concession and would certainly sell at 69*s.* per cwt., probably slightly below that figure.

GUM ACACIA.—Quiet for all varieties, excepting *East Indian Ghatti*, which is in demand, but in very small supply, and realises very high rates. Good *Karachi* gum is also scarce. The supply of *Soudan* sorts is increasing and the demand remains slight. Quotations run from 45*s.* up to 65*s.* per cwt. according to quality; fine *Ghezirah* gum has been sold at 40*s.* per cwt., and common grades are offering at 35*s.* per cwt. *Turkey Amrad* is scarce at 30*s.* per cwt. for good quality, nominally. The stock of so-called insoluble *Persian* gum is heavy: red to pale picked, 15*s.* to 20*s.*; sorts, 11*s.* to 14*s.* per cwt.

KINO.—The supplies of genuine *East Indian* kino are very small, and the only holder of this variety asks from 14*s.* to 15*s.* per lb., although he would probably take 13*s.* There has just been an arrival of about 100 lbs., packed in small bags, of scarlet-coloured kino from the *Zambesi* district, of the kind which has been referred to at evening meetings of the Pharmaceutical Society last year.

MASTICH.—Good bright pale drop has been sold privately at 1*s.* 9*d.* per lb. The supply of the article is large, and the market generally rather depressed.

OIL (CASTOR).—Good second *Calcutta* oil has been sold at 2*1/2d.* per lb. on the spot. For first quality from 3*d.* to 3*1/4d.* per lb., is required, which is dearer. *Italian* oil is still held at from 30*s.* to 30*s.* 6*d.* per cwt., f.o.b.

OIL (COD-LIVER).—It is reported that in Norway the stock of 1895 oil has been almost cleared. Up to the present the production of the new season's fishing is said to have been very small, although the livers are reported to yield a better percentage of oil than they did at the commencement of the season of 1895. The weather up to the present has been rough. A few parcels of new season's oil have been landed in London this week. The quotation for best non-congealing remains 18*s.*, c.i.f., per barrel for prompt shipment. The fishing in the *Lofoden* district will begin next week.

OILS (ESSENTIAL).—Small sales of *Star-anise* oil are reported on the spot at 10*s.* 1*1/2d.* per lb., denoting a slightly easier market. The c.i.f. quotations are unaltered. *American* oil of *peppermint*, H.G.H., is selling slowly at 10*s.* 1*1/2d.* per lb., according to quantity. *Oil of citronella* nominally unchanged on the spot. There is, however, scarcely anything obtainable here or in *Ceylon*. *Otto of rose* of fine quality is scarce, and it is said that in America the leading brands have been advanced all round. *Italian* essential oils are generally quoted higher: *Lemon* at from 4*s.* to 4*s.* 6*d.* per lb.; *Bergamot* at from 8*s.* 2*d.* to 10*s.* 6*d.*; and *Sweet orange* at from 7*s.* to 8*s.* per lb., f.o.b. *Messina*, according to brand. *Lemongrass* oil very firmly held at 2*1/2d.* per cwt. for fair native brands on the spot. *Indian rose* (*Geranium*) offers at 3*1/2d.* for good quality on the spot, and *Oil of cinnamon* is rather scarce, at 1*s.* per oz. for fair native brands.

POTASH SALTS.—*Permanganate* still remains scarce and in fair demand; small crystals may be had at 62*s.* 6*d.*, large at 67*s.* 6*d.* per cwt. *Chlorate* is offering at 4*3/4d.* per lb. in London, either on the spot or for forward delivery. *Cyanide*, 98 per cent. to 100 per cent., offers at 1*s.* 4*d.* per lb.; *Bromide* at 1*s.* 8*d.* per lb., *Prussiate* at 7*1/2d.* per lb. for *Beckton*, and

8*d.* for other British brands, *Bichromate of potash*, 4*5/8d.* per lb. *Salt-petre* is quoted at from 21*s.* 9*d.* to 22*s.* 9*d.*, according to packing, for *British* refined, and at 20*s.* 7*1/2d.* to 21*s.* 4*1/8d.* for *German*. *Montreal* potashes, 22*s.* 6*d.*; *Pearl-ashes*, 37*s.* 6*d.* per cwt., f.o.b.

QUICKSILVER.—The importers' price remains 7*l.* 7*s.* 6*d.* per bottle, while second-hand holders are slightly easier in quantities, 7*s.* 5*s.* being now the general figure.

QUININE.—Steady at the prices quoted in our last issue. A fair number of sales of small wholesale quantities has been made privately at from 13*1/2d.* up to 13*5d.* per oz. for second-hand *German* bulk, according to brand.

SAFFRON.—Very firm at from 27*s.* per lb. for best *Valencia* downwards.

SHELLAC closed lower at the end of last week with sellers of *Orange TN* at 84*s.*, c.i.f., for January-March, and 82*s.*, c.i.f., for March-May shipment. This week, however, there has been a renewed improvement, and at the auctions 353 cases out of 664 offered sold at very steady rates up to 1*s.* advance on *Second orange*, the quotations being 100*s.* to 101*s.* for good pale; 90*s.* to 95*s.* for medium, partly cakey, to fair reddish; and from 85*s.* to 88*s.* for unworked common red to fair ditto. The spot quotation for *Garnet lac A.C.* is 92*s.* per cwt. To-day sales are reported of 50 cases at 82*s.*, c.i.f., March-May delivery.

SODA-SALTS.—*Nitrate*, very quiet at 8*s.* 2*1/4d.* for refined and 7*s.* 7*1/2d.* for ordinary kinds. *Caustic*, 70 per cent., is quoted at from 7*l.* 15*s.* per ton. to 8*l.* 15*s.*, according to quantity, on the spot. In Liverpool the quotations are 9*l.* 2*s.* 6*d.* for 76 per cent., 7*l.* 10*s.* for 70 per cent., and 6*l.* 10*s.* for 60 per cent., all f.o.b. *Soda crystals*, 42*s.* 6*d.* per ton, ex ship or wharf in London, or f.o.b. *Tyne*. In Liverpool the price is 47*s.* 6*d.* f.o.b.; 58 per cent. refined *Alkali*, 67*s.* 6*d.* to 72*s.* 6*d.*, according to place of delivery. *Bicarbonate* in kegs 7*l.* 5*s.* per ton ex warehouse. In Liverpool the price is 6*l.* 15*s.* and 6*l.* 5*s.* for casks f.o.b.; *Bichromate*, 3*7/8d.* per lb., and *Prussiate*, 6*1/4d.* per lb.; *Hyposulphite* is quoted at 7*l.* 15*s.* per ton on the spot, and at from 6*l.* to 7*l.* per ton f.o.b. *Tyne*, according to packing.

SPERMACETI.—The supplies in America have been coming on the market more liberally lately; good refined for shipment is offering at 1*s.* 7*1/2d.* per lb., c.i.f. terms.

SPICES.—In the course of last week a decided improvement in *Pepper* and *Pimento* manifested itself, and this has made further progress during the past three days. In *Zanzibar Cloves* some fair sales have been made at from 2*d.* on the spot to 2*3/4d.* per lb. for March-May delivery; and at auction to-day common dull to good bright realised 1*7/8d.* to 2*1/2d.* per lb. *Capsicums* are lower, with sales at 19*s.* for fair *Bombay*, and 20*s.* to 22*s.* per cwt. for fair *long Japan*. Ordinary to good *Pimento* has sold at 2*1/2d.* to 2*3/4d.* per lb. *Mace* and *Nutmegs* are flat and lower; *Jamaica Ginger* very firm, with sales of *Khatoon* at 65*s.* per cwt. *Cochin ginger* is steady, with sales of fair bold brown rough at 34*s.* to 35*s.*; small washed at 33*s.* per cwt. *White Penang Pepper* has sold on the spot at 2*15/16d.* per lb.; good washed black *Singapore* at 2*1/4d.* per lb.

STICKLAC.—Quiet, but steady, at 80*s.* per cwt. for fair *Siam*.

TRAGACANTH.—Holders are extremely firm, and the high prices which they ask are checking business, which otherwise would be brisk, as there are so many inquiries. *Persian* is quoted now at 15*l.* per cwt. for good pale firsts, 13*l.* to 14*l.* 10*s.* for seconds, 11*l.* 10*s.* to 13*l.* for thirds, 9*l.* to 11*l.* for fourths, and 7*l.* 10*s.* to 8*l.* 10*s.* for ordinary dark.

TURMERIC has been slightly firmer at 7*s.* to 7*s.* 6*d.* per cwt. for fair *Bengal*, and 8*s.* to 8*s.* 3*d.* for bright *Madras* finger. *Chinese* offers at 6*s.* to 6*s.* 6*d.* per cwt.

VERDIGRIS.—In balls, pods, or fine powder, 61*s.* per cwt. London terms.

VERMILION.—Fair brands of *Chinese* have been sold lately in small quantities at 2*s.* 4*1/2d.* per lb.

WAX (BEES).—Very firmly held, with business in yellow bleached *Bombay* at 6*l.* 7*s.* 6*d.* to 6*l.* 12*s.* 6*d.* per cwt., and in *Zanzibar* of mixed colours at 6*l.* 15*s.* per cwt.

THE difficulties that have arisen in the Scotch oil-trade, to which reference was made a fortnight ago, were under consideration at a meeting of representatives of the Scotch Oil-trade. The companies in Glasgow on Saturday. The discussion had reference mainly to a proposal to reduce the prices of paraffin scale, and to the way in which the output of surplus stocks of this article is to be absorbed. Further consideration of the matter has been adjourned for another week. It was agreed to reduce the price of paraffin candles 3d. per dozen pounds, and the proposed reduction on the price of paraffin scale is $\frac{1}{16}$ of a penny per lb. It is feared that the difficulty regarding scale may introduce serious dissension among the oil companies.

INVITATIONS are now being issued by the London Chamber of Commerce to the various British Chambers of Commerce, to participate in a third congress of such forthcoming bodies throughout the Empire, to be held in the Commercial Congress, early part of June next. Already expressions of approval have been received from 29 colonial Chambers, and Mr. Chamberlain, as Secretary for the Colonies, has accepted the position of honorary president of the congress. Among the questions which will probably be discussed are the commercial relations between the mother country and her colonies and dependencies, boards of labour, conciliation, and arbitration, codification of the commercial law of the Empire, bills of lading reforms, the decimal system of weights and measures and currency, imperial penny postage, and inter-colonial trade relations.

The Smyrna and Constantinople Opium-markets.

Our last mail-reports from Smyrna are dated January 11. They state that since the beginning of the month business has been drooping. In the second week of the month certain Smyrna holders, impelled thereto by their financial necessities and by the reserve of the American and Continental buyers, gave way and sold 25 cases tale quale Adetta at the equivalent of 70 piastres, and 5 cases inspected Yerli at 72 piastres, all for export. The market closed very weak at the time of writing. The news from the growing districts remains favorable. The sown fields are now covered with snow, which will keep the frost off the young plants. Our correspondent in Constantinople writes on January 17:—"A week of stagnation has drawn to a close and marks a decline of 6 per cent. on the highest price touched of late. Heavy American buying is expected at the decline. The 1894-95 crop is now estimated by some to have yielded only 8,000 cases. At the commencement arrivals were large, and pointed to a yield of fully 9,000 cases; of late, however, they have fallen off considerably, and to explain this two reasons are brought forward: either the crop fell short of the general expectations, or else the slow demand and banks' cessation of making advances have induced holders to keep back their stuff. For the time being it is quite impossible to say which of these two arguments is the sounder. So far as 'soft' districts are concerned, the political insecurity prevents the shipment of opium. The new crop promises well, and the weather continues to be favourable."

SAVED BY A PATENT-MEDICINE ADVERTISER.—The great French painter, Bastien Lepage, who died lately, had a long struggle with poverty before he could win recognition. He was gaining only a bare subsistence in Paris, painting fans, when a patent-medicine manufacturer who wanted a striking advertisement contracted with him for a suitable picture. Lepage painted a landscape in the April sunlight; the leaves of tender green quivered in the breeze; a group of beautiful girls gathered around a fountain from which the elixir of youth sprang in a bubbling stream. Lepage believed there was real merit in it. "Let me offer it at the Salon," he asked his patron. The manufacturer was delighted. "But first paint a rainbow arching over the fountain," he said, "with the name of my medicine upon it." Lepage refused. "Then I will not pay you a sou for the picture!" The price of this picture meant bread for months, and the painter had long needed bread. The chance of admission to the Salon was small. He hesitated. Then he silenced his hunger, and carried the canvas to the Salon. It was admitted. Its great success ensured Lepage a place in public recognition, and his later work a place among the greatest of living artists.

Notes on Indian Drug-cultures.

MR. LAWSON'S report on the Government Botanical Gardens in the Nilgiris (British India), which has just been issued, contains some interesting notes on the progress of the medicinal drug-cultures in his district. That progress, taken all round, is surprisingly slow, but two or three cultures, including such important ones as jalap and ipecacuanha, have evidently struck firm root, literally and metaphorically. The Madras Medical Department's wants in jalap appear at present to be entirely supplied by the Botanical Gardens. Private planters who cultivate the tuber are to be allowed, it seems, to participate in supplying those requirements. A planter, in reply to a request by Mr. Lawson for ipecacuanha-seed, reported that he could not oblige, as his plants had not flourished, owing to the heavy drip from the forest trees underneath which they grew. He, therefore, uprooted the plants and replanted them under light artificial shade, where they seem to flourish. The 20 lbs. of dried root obtained from the uprooted plant was sent to London and sold by auction for 5s. 4d. per lb. Messrs. S. Figgis & Co., the brokers, described it as "very fine picked root of nice colour, &c.," but, as a matter of fact, says the grower, "it was not picked at all."

In February the Medical Storekeeper of Bombay inquired for belladonna-root. He was informed that the *Atropa Belladonna* is not indigenous to the Nilgiris, nor is it cultivated there, but that he could be supplied with datura-root (*Datura Stramonium*), of which the alkaloid has been shown to be identical with atropine. A small quantity of datura was sent to him for trial, and his report is awaited.

Acorus Calamus (Sweet flag), a plant introduced from Europe, is very common in swampy ground about Ootacamund. A sample of the dried root has been investigated by Surgeon-Major Parker, of the Bombay Medical Stores Department, who reported that very little aromatic oil could be obtained by distillation from the powdered root, and suggested that this might be due to the evaporation of the volatile oil during the process of drying and grinding, and asked that a few ounces of the oil might be distilled from the fresh plant. This has been done in the Government Gardens at Ootacamund, and about 4 oz. have been sent to Dr. Parker. The odour of this oil is very strong and pungent, so that in all probability Dr. Parker's surmise that there is a considerable loss of oil in drying is correct.

The *Quillaia saponaria*, a South American tree yielding the soap-bark of commerce, was planted in the gardens about eleven years ago, and has since made very satisfactory growth. Last year some of the trees were cut down, and the bark was sent to Mr. Hooper, the quinologist, for analysis and report. The bark had the characteristic appearance of the commercial article, and afforded an equal amount of saponin when tested by Flückiger's method. When soaked in water it produced a liquor having a permanent froth, which showed that it could be used for the same purposes as ordinary soap-bark. Reference was made to Kew about the drug, and the authorities were asked if the export of such a bark to England would meet with satisfactory remuneration. They replied that there was a good and increasing demand for quillaia-bark in the London market, but the price was very low.

Last year several planters made inquiries about refuse tea-seed and its value as a manure, and asked if its oil could be extracted profitably and was in any way superior to other well-known fixed oils. Mr. Hooper made a complete analysis of some seeds from a Nilgiri tea-estate, and found in them 22.9 per cent. of fixed oil, 9.1 per cent. of saponin, 8.5 per cent. of albuminoids, besides the ordinary constituents of plants. He concluded from the analysis that the seed was not suitable for manufacturing an oil, as the proportion of oil was much smaller than that found in such well-known products as sesame, cocoanut, and castor, and the expressed oil would always contain some of the bitter and acrid saponin, which would render it very objectionable. The seed might be used as a manure or as an insecticide, as saponin is a poison, and a strong decoction of the bruised seeds might kill many of the insects that infest cultivated tea-bushes.



Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.

Anti-cutting.

SIR.—With regard to this "cutting" question, who are the cutters, and where does the cutting begin?

Is there not great inconsistency on the part of those wholesale dealers who, although they profess anxiety to put an end to cutting, systematically persist in cutting the prices of leading proprietary articles, selling them at a profit of $2\frac{1}{2}$ per cent., and in some instances even less, thus helping retailers to cut? At the same time, in the cases of three or four manufacturers of popular specialities, who put pressure upon them, they bind themselves not only to maintain fixed prices, but undertake to bind their customers in like manner, and yet in the regular course of business they go on cutting other articles in precisely the same manner as before.

What is the object of all this. Is it not throwing a sprat to catch a mackerel? And if the practice be legitimate in the wholesale trade, is it not equally so in the retail?

How is this practice to be put an end to? If wholesale dealers, who are comparatively few, will persist in cutting, and cannot agree amongst themselves to charge fair remunerative prices, is it reasonable to suppose that retailers, who number thousands to their scores, will be persuaded to do so? Amongst wholesale dealers agreements of this kind have never been arrived at; some few have always stuck out, and the result has been that all meetings called for the purpose have hitherto ended in failure.

Independently altogether of retail chemists, the stores and other large buyers such as Whiteley, Shoolbred, &c., have to be dealt with. How many manufacturers will refuse to supply these; and will such houses submit to restrictions as to the prices at which they are to sell? Moreover, is it to the interest either of manufacturers or dealers to restrict the sale of their goods by throwing vexatious obstacles in the way of buyers? We are satisfied it is not, and we believe that the few firms remaining who have not already abandoned their anti-cutting schemes have proved them to be more plague than profit.

As an instance of the amount of trouble and detail consequent upon these anti-cutting schemes, we will give you a case in point, although it must be distinctly understood that from the first we have refused to sign any agreement pledging ourselves to interfere under any circumstances with sales by our customers, considering that such action on our part would be unreasonable and unwarrantable.

A short time since, we received advice from one of the manufacturers with whom we were dealing (under an agreement not to undersell) that one of our customers whom we had supplied was cutting the price of a certain article, with a request to sign a printed form on card enclosed promising not to supply him in future. This we refused to do, and supplies in consequence have since been stopped. For curiosity's sake, however, we carefully examined his account, running over three and a half months. There were 37 entries containing in all 171 items amounting to 174l. 4s. We found we had not supplied him with a single packet, and even supposing we had, would it have been our province or to our interest to interfere with him in such a matter? We know not. We are informed that a similar advice and card for signature was sent to all the wholesale dealers in London committed to this scheme, which, by the way, involves also a pledge not to supply any customer who is a purchaser of the article in question without first obtaining from him a signed document not to undersell.

We yield to no one in our desire to moderate or put an end

to this cutting, and we would do anything in reason to assist in accomplishing so desirable an end; but we will not commit ourselves to any system of boycotting or coercion, or any scheme which necessitates what we consider an unwarrantable interference with the business of our customers.

Let the wholesale dealers, with whom we will gladly co-operate if they will combine, set a good example to their retail brethren by refusing to supply any proprietary article without a fair remunerative profit, and let the retailers support them in such action. Take, for example, Cockle's pills, which cost in quantity of not less than 100l. worth 8s. 6d. per dozen, net cash; instead of listing these at 8s. 9d. per dozen (in three dozens) and thus forcing us to do the same—a profit which cannot pay ordinary trade working-expenses—let them be charged 9s. 6d. cash or 10s. credit, and all other articles in proportion. This would not injure the retailer, and let him follow suit by charging 1s. cash or 1s. 1½d. credit. The cutters are dotted about here and there, but they and the stores are comparatively few, and for the sake of a few halfpence the public will not travel any distance or put themselves to inconvenience.

Some chemists—we hope not many—by charging exorbitant profits on all kinds of miscellaneous goods, such as brushes, combs, sponges, sponge-bags, chest-protectors, smelling-bottles, and the like, have to a great extent themselves to thank for the injury complained of from outside traders; in this way they have driven many of their customers into other channels.

We have before us a number of articles which have been returned to us at intervals by our customers for repair, exchange, &c., marked in plain figures at exorbitant prices, at profits varying from 100 to 200 per cent. Now, with all due respect, and without presuming to dictate to our customers, we would suggest, in their interest as well as our own, that from 25 to 50 per cent. is a more legitimate profit on such articles, and one much more likely to gain and retain the confidence and support of the buyers of such goods.

Yours faithfully,

S. MAW, SON & THOMPSON.

SIR.—In reference to the remarks in your last issue on "The Failure of an Anti-cutting Scheme," I think the explanation given the *C. & D.* representative by Mr. Bergheim is not quite satisfactory. "I bought," said Mr. Bergheim, "that a minimum profit of about 40 per cent., or thereabouts, would have satisfied the trade." Afterwards he says: "We often found chemists who had signed our agreement selling below the minimum fixed price." Why not prosecute them?

No one need be surprised at this result, for 40 per cent. is too much profit for simply selling an article which has cost the seller neither time, labour, science, nor art; and that is one of the reasons why I myself hesitated before signing Messrs. Stern's rather mysterious form of agreement. That these protective schemes can be a success is proved by the fixed prices maintained for Elliman's, Bovril, &c. It is therefore useless for Messrs. Stern to place the blame of their non-success upon chemists. The fault must be due either to the way the scheme was promulgated, or to a want of confidence in the articles themselves.

I am Sir, &c.

South Norwood, S.E., January 21.

J. JENKINS.

SIR.—As the failure of a certain "anti-cutting scheme," and the faults found with it by the originator, may possibly convey a false impression with respect to other systems—and it is our own we have particularly in view—we venture to ask that, with your usual courtesy, you will allow us space to relate our own experience in securing a fair profit to the retailer.

We have now probably something like 10,000 names of people who have signed our agreement, and we do not know of one person in the kingdom who is not carrying out the terms of his arrangement with us. "We value your custom very much, but we value our word of honour to Messrs. Blondeau much more," wrote one firm in Cambridge to a customer the other day, who complained that she could get "Vinolia" soap cheaper elsewhere. We telegraphed to the retailer to whom she referred, politely calling his attention to the fact that he was departing in the case

of one line from the terms of his arrangement with us. In response, he very courteously expressed his regret, and put the price right, explaining at the same time that it was altogether unintentional on his part. These two cases illustrate very forcibly the value the people with whom we deal place upon their word. We place great value upon it also. It is the corner-stone of our minimum "cutting" system.

As to the trouble involved, we may point out that the working of our plan does not call for more than half an hour, and sometimes not more than ten minutes, of one of our clerk's time each day, and it gives rise to no correspondence worth mentioning.

To ask if the trade like our arrangement, is very much the same as asking if they like a fair profit. There is not one of our travellers but always insists, when he visits the office, that our minimum "cutting" system is most popular among retailers and the most satisfactory step we ever took in a business way. Our plan has now been working some half-dozen years. We can confidently affirm it is an unqualified success in every particular, and that it is appreciated and, indeed, highly valued, not only by chemists proper, but by all classes of tradesmen.

We create the demand for "Vinolia" soap and preparations ourselves; our turnover is very large, and we are therefore in a position to place the minimum "cutting" price at a figure which will secure a fair amount to the retailer in an ordinary way of business on the turnover for the year, and yet leave our goods "fairly in it" with all competing lines as regards value for money.

We are bound to confess, while we do not believe our minimum "cutting" system circumvents the tendency of some to substitute occasionally similar articles bearing their own name, we are of the firm belief that upon the whole it makes the enterprising retailer feel that business in "Vinolia" soap and preparations is worth looking after; that he would not like to lose it; and that it is worth while keeping a good stock on hand. Finally, instead of "a large number having told us that they objected to sign" our minimum "cutting" agreement, we have found the mass of our customers even more zealous than one would have expected. The proof of the pudding is in the eating. After years of working our minimum "cutting" plan, we can state in all truth that the success of it has surpassed our most sanguine expectations. One reason why our system has succeeded where other systems have failed is that we have "stuck to it," and in the first few years did not consider anything incident to its proper working too great a trouble, expense, or loss of time. It is the same with us still: we adhere unflinchingly to the terms of our arrangement with the trade. On the other hand, the trade understand that it is not mere child's play with us, and they work with us heart and hand.

We are, dear Sir, yours faithfully,
BLONDEAU & CO.

Profit on Patent Medicines.

SIR,—Although not in favour of boycotting wholesale houses, I do not see why there should be any real trouble about getting manufacturers of patent medicines to fix a minimum price. The reason urged against this proposal most strongly appears to be that retail chemists damage the interests of manufacturers by pressing substitutes of their own. There is, no doubt, some truth in this, but chemists are not so guilty of this charge as stores. Do manufacturers know that many stores habitually advertise patents at the very lowest prices simply in order that they may get a chance to push substitutes? Did they never hear of the ticket system? It is adopted in some stores with great success. This is how it is worked. A substitute is put up; it is made to look as nearly like the real thing as it is safe to make it, only it is always larger. If it is to be sold at 2s 6d, a ticket is attached, value 2d.; if at 1s. 1½d., a 1d. ticket is attached. When an assistant succeeds in getting a customer to take one of these substitutes, he puts the ticket in his pocket, and gets paid for it and as many more as he has on Saturday night, or at the end of the month. Some assistants draw as much as 8s. or 10s. per week in this way alone.

There is not a living profit upon patents to anybody at

present, with the result that stores and chemists alike put up substitutes. All this is directly traceable to the stores. So far as I am concerned I always give my customers exactly what they ask for, and I am persuaded that if there was a fair profit upon patents, no self-respecting chemist would be so undignified as to humbug a customer into taking something different to what he asked for. The stores simply make a red flag of patents to draw the public, and the manufacturers of patents pay the piper in the shape of advertising. If these manufacturers think that stores are anxious to sell their preparations at store list-prices they must be "greener" than most of us suppose.

If manufacturers cannot combine to fix a minimum price which gives a living profit, perhaps chemists could combine to refuse to stock patents that are cut. The public would not long appreciate medicines which were not countenanced by chemists. The stores may get the cash, but the chemists have still the respect of the community. It is common for manufacturers to advertise that their preparations are "kept by all respectable chemists," which proves that to a great extent these patents subsist upon the dignity of the profession. How would this read?—"Snagg's patent curealls not kept by any respectable chemist." Stores or no stores, Mr. Snagg would not sell many of his curealls if respectable chemists refused to stock them.

R. (237/9.)

"Minor" Volumetric Analysis.

SIR,—It was with much interest that I read your article on this subject, and I shall be glad if you will grant me space to relate my experience, as I am of opinion that too much publicity cannot be given to this matter. In July, 1895, I entered for the "Minor," my paper for practical chemistry being as follows:—

(1) Determine the KMnO_4 in 1 c.c. of the given solution by means of solid $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$, and prepare a solution of $\text{K}_2\text{Cr}_2\text{O}_7$ of strength equivalent to that of the permanganate, proving its accuracy by experiment.

(2) Analyse qualitatively the substances contained in the pill-boxes. (They proved to be morphine hydrochlorate and sodium phosphate.)

Many other papers, which I afterwards saw, were similar to the above, some being easier, others more difficult; but the general principle was the same. The day before I had to appear for my practical work, a friend (who had just been ploughed through being unable to work out his volumetric analysis) showed me his paper, so I was not surprised when I entered the laboratory at the Square to find such a question as the foregoing, and, naturally, I felt a little uncomfortable as I had not done a similar operation before; however, I managed to work it out quite correctly.

As a comparison, let me state the questions which were given to a candidate who presented himself in October, 1894:—

(1) Determine volumetrically the percentage of real acid in the given solution—vinegar.

(2) Take specific gravity of liquid—syrup.

(3) Analyse qualitatively the substances contained in the pill-boxes. (Found to be quin. hydrochlor. and ammonii phosphas.)

It appears to me that considerably more study and time must be spent on volumetric work to enable one to conduct successfully such operations required by the questions of the former paper (July, 1895), and that it is nothing more or less than an imposition on candidates to set such questions without due notice having been given in the syllabus as to what is required of them. If the examiners are not cognisant of what that interesting pamphlet contains, I trust they will study it before the April examination; the length of it may possibly surprise them. Perhaps the reason why the percentage of passes is generally greater in Edinburgh than in London is because the examination at the northern city is a fair one, which cannot be said of the one in London; while, in the syllabus, statements are made which are found by candidates presenting themselves at Galen Place to be entirely misleading.

I hope your comments will not be passed unheeded by the Pharmaceutical Council, who, in fairness to all concerned, should at once take steps to rectify the present unjust state

of things in connection with such an important examination as the "Minor."

Worcester, January 13.

Yours truly,

HARRY S. WILKES.

The Minor: A Plea for a Written Examination.

SIR.—It is customary for you to receive about this time letters from candidates who have been successful in their Minor examination. These letters are to a certain extent instructive, but I think they are none the less frequently misleading. All I have read appear to be from candidates who have been successful at their first attempt, and they generally end with the well-worn phrase, "Allow me, in conclusion, to testify to the fairness of the examination and of all the examiners." Under the circumstances it is a very natural conclusion to arrive at, but I am convinced if they could only have had a longer and wider experience of the examination they would modify their opinions in reference to the examination. My own opinion is founded on the experience of more than one examination, and in part also from the experience of many others. Of course, I am aware that there must exist a certain amount of luck in every examination, but I consider the Minor exceptionally liable to this from the fact that the conditions under which it is held are different to those of almost any other examination. In the first place, it consists solely of a practical and oral examination. There is no written portion, and it is chiefly the lack of this which renders the examination so unequal and so unfair. No one will deny that a candidate of a nervous temperament will do better justice to himself if he be allowed a few hours to himself with pen, ink, and paper than personally confronting the examiner. It is surely preferable to eradicate the personal element in every examination as far as possible. Moreover, what is more important, in a written examination the candidates all get the same questions, and therefore equal questions. At present, in many instances, they get neither. A candidate going through the rooms three times will find it possible not only to get three different examiners in pharmacy, but also—and this is where the injustice comes in—three different standards of examination. This possibility extends through the whole of the examination. If time and space permitted I could give instances which, even to a prejudiced mind, would be convincing proof of this; but, as I have said, the conditions of the examination are in themselves sufficient to prove the liability to unfairness. The integrity of the examiners I do not question, but the efficiency and fairness of the examination I emphatically deny. I do not, and never have, complained of its severity. My complaint is that there is no standard. This explains the startling results which characterise this examination. It may be asserted that, provided the examiners keep within the range of the syllabus, even a purely *viva-voce* examination could not be unfair. Different men, however, may have different interpretations of the same thing, and, besides, no man with any knowledge of the examination will deny that there has been distinct advance made in it during the last eighteen months; and when we remember that the present syllabus was printed in July, 1891, we are impelled to the conclusion that either the examiners pay little heed to the syllabus or that the syllabus is vague. However this may be, it must be clear that candidates would have a more even examination if a written portion were introduced instead of, or in addition to, the oral one.

I am, Sir, yours faithfully,

January 13.

AN A.P.S. OF RECENT DATE.

White-wine Vinegar.

SIR.—After carefully perusing the letters, &c., appearing at the present time in our trade-journals, I find no one has satisfactorily answered the query as to what is intended by the customer when "white-wine vinegar" and "white vinegar" are asked for. As you, no doubt, are aware, in nine cases out of ten, the article is required for a "liniment," and if we chemists suddenly turn conscientious and supply genuine "white"-wine vinegar (which, as we all know, is not white in colour), we should very soon be informed that "it ain't like mother had before."

May I suggest, in order that we may be uniform in the article with which the customer is served, that when "white

vinegar" is asked for we supply ac. acetic. dil., and label it "distilled" white vinegar, and when "white-wine vinegar" is demanded we supply the real article—explaining at the same time the difference to the customer, or, when an analyst is suspected, ask him twice whether he requires "distilled white vinegar" or "white-wine vinegar," they being different articles?

I am,

Yours truly,

313 Sydenham Road, S.E.

A. W. NUNN.

Sealing-wax on Bottles.

SIR.—As great an inconvenience as the sealing-wax on bottles complained of by Mr. Bell is the thoughtless habit in some wholesale houses of driving corks so fast into the necks of bottles that it is sometimes impossible to withdraw them entire. Charlesden's method of extracting sealed corks is a good one, but I was amazed at the advice "to use the sharp point of the scissors to prise the cork about half out of the bottle." I have been brought up to greatly respect the scissors, and on no account to use them as a lever or for cutting wire, &c., and I can imagine the reprimand I should have had from some of my old masters if I had been found so doing.

Yours truly,

Newport, Salop, Jan. 20.

T. W. P. (253/55.)

Pharmaceutical Arithmetic.

SIR.—While this subject is fresh in the minds of your readers they might study the following problem:—

"A very striking example of expansion occurs in the preparation of the spirit of camphor B.P. In one experiment the author placed 10 grammes of camphor in a graduated cylinder, and added 90 c. c. of rectified spirit of .830 specific gravity. The tincture produced measured exactly 100 c.c., so that, as camphor has a density of .996, 10 grammes would measure 9.96 c.c., and hence camphor dissolves in alcohol without sensible change of volume. The tincture was found by experiment to have a density of .8446, the theoretical density, assuming no change of volume, being .8466."

I quote from a *Year-book* abstract of a paper by a well-known public analyst. The questions to be answered are: (1) What volume does 10 grammes of camphor occupy? (2) What is the theoretical density of spirit of camphor? (3) Is the spirit an example of expansion or contraction?

Yours truly,

PHARMACEUTICUS. (237/90.)

Verily, there is Nothing New.

SIR.—I well remember, thirty-five years ago, an old lady remarking to a young mother, whose infant did not get on as she could wish, "Depend upon it, my dear, he wants some rabbit's brains" (how to be used I forgot); and to-day I find, in Martindale, neurasthenia improved by an extract from brain of rabbit.

Yours,

January 2.

J. B. (235/61.)

DISPENSING NOTES.

Correspondents should consult "The Art of Dispensing" in regard to dispensing difficulties. Difficulties not explained therein may be sent to the Editor, who invites a general expression of opinion upon the under-mentioned topics.

A Pine-liniment.

238/12. *Phenacetin* is unable to turn out a presentable liniment from the following:—

Ol. pini sylv.	..	..	..	..	..	3ss.
Liu. pot. iod. c. sapone	..	..	..	..	..	3ss.
M. Ft. lin.						

[We get a good result by mixing 3j. p. sapo. alb. with the ol. pini in a mortar before adding the lin. pot. iod. c. sapone.]

A Cascara mixture.

237/63. *Pharmacist* would be glad to know what the following mixture should look and taste like, it having been dispensed elsewhere sweet and with a thick deposit:—

Ext. cascara. liq.	..	..	..	..	..	3ss.
Glycerini	..	..	..	..	..	3ij.
Aq. ad	..	..	..	..	..	3vj.
Ft. mist.						

[This, made with B.P. liq. ext., gives a slightly opalescent mixture with the very pronounced bitter taste of cascara. The tasteless extract may have been previously used—wrongly, of course—but that would not account for a big precipitate.]

Suppositories.

242/16. *Ergotia* requires advice as to dispensing the following suppositories:—

Ext. ergot. (solid)	..	..	..	..	..	gr. ij.
Ext. opii.	..	..	..	..	..	gr. $\frac{1}{2}$
Ext. nuc. vom.	..	..	..	..	..	gr. $\frac{1}{2}$
Cocain. hydrochlor.	..	..	..	..	..	gr. $\frac{1}{2}$
Ol. theobrom.	..	..	..	..	..	q.s.

Ft. suppositoria.

Mitte xij.

[Rub down the extracts and cocaine on a warm slab, and gradually add the ol. theobrom., which should be only just melted, return to the suppository-bath, pouring into the mould as soon as liquefied, using the least possible heat. Your trouble arises from using too much heat.]

Rhubarb-pill.

Can the following be dispensed without the addition of anything else?—

Pulv. rhei	..	..	..	..	..	gr. iv.
Tr. zingib. fort.	..	..	..	..	..	q.s.
Ft. pil.						

Mitte vi.

[Hardly; with a rectified-spirit tincture alone the mass will not bind. A couple of drops of water will put matters right.]

LEGAL QUERIES.

Immediate information on pharmaco-legal matters is available in "Pharmacy and Poison Laws of the United Kingdom," Alpe's "Handy-book of Medicine-stamp Duty," and THE CHEMISTS' AND DRUGGISTS' DIARY.

27/16. *Nondescript*.—See answer to "Styrax," January 18, page 95. Red and white precipitate ointments have not hitherto been regarded as poisons, because, though the precipitates themselves are named in the schedule, preparations of them are not named. But the Courts have held that, if a poison is contained in a compound, the sale of that compound is a sale of the poison. This applies also to chloroform preparations. "All vesicating liquid preparations of cantharides" are named, but clearly these do not include the ointment nor the paper.

250/66. *T. B.*—Though the Board of Inland Revenue will allow licensed vendors of medicines to break open stamped packets of medicines which they have purchased from a wholesale dealer, and sell the contents out in small quantities without payment of further duties, provided that they are not made up into a new packet, the Board do not sanction a similar proceeding on the part of the original maker or compounder of the medicine.

254/28. *Scot.*—We do not think the label you send us renders the medicine liable to medicine-stamp duty; but why not get an authoritative statement by sending it to Somerset House?

242/13. *Ignoramus*.—No one, we should think, would venture to give you an opinion as to your chance of recovering your costs from C on such slender information as you give us. If you think you have a claim, you had better tell a solicitor all the circumstances, and let him act for you.

249/5. *Staffordshire* asks if it necessary for the purchaser of a business to take out a new medicine-licence, or if the one taken by his predecessor is valid. [He must. The licence is personal. We believe the Board allow the licence to be operative till the next licensing-day in the case of heirs, executors, &c., of a duly licensed person.]

252/4. *H. H.*—The word "vaseline" is a registered trademark.

252/30. *Mr. A. H. Hinde*, of Lowestoft, sends us a handbill which he recently sent to Somerset House, on which appeared an announcement of a cough-remedy, at the end of which were the words, "See that the name 'A. H. Hinde' is on the Government stamp." This, he explained, is put on the stamp by an ordinary rubber-stamp. When the bill was returned no reference was made to this, so Mr. Hinde supposes it is allowable, and he thinks many readers will be interested in this record of his experience. [We do not see how it could be regarded as an offence to stamp the medicine-stamps as described; and if it is not an offence to do so, it cannot be an offence to say you have done so. But we can hardly accept Mr. Hinde's reasoning as conclusive that the authorities have sanctioned it because they had not said anything about it when their attention was called to it.]

247/52. *Insular*.—You ought to employ an experienced valuer to obtain for you the best terms if you give up your lease. It is impossible for us to estimate how much you ought to obtain without knowing all the circumstances; but we should think three years' net profits would not be too much to ask if your calculation is anything like correct.

253/16. *Stultus*.—It is legal for an unqualified assistant to sell a poison provided that the sale is "supervised" by a qualified man. Mr. Justice Hawkins declined to lay down the exact limits of supervision, and we cannot supplement his discretion. This is a matter for individual judgment.

239/5. *Nemo* says he bought a business for a lump sum without any valuation. In the purchase was included a number of syphons, but at the time of purchase no mention was made that the empty syphons were excepted, and there is nothing in the agreement to that effect. The vendor now claims them, the total value being 37l. odd. "Nemo" asks if he is compelled to allow the vendor for these when returned. [If the syphons had been actually bought by the party who sold the business, and if he then sold his business as it stood, with all his stock, to "Nemo" for so much money, we do not see what right he has to claim 37l. worth back. But if the syphons were merely on loan from the manufacturer (a system not unusual, and which "Nemo" may be presumed to be familiar with), he ("Nemo") could, not we think, claim them or their value.]

9/23. *Nemo*.—Notice can be given on other than your pay-day, and dates from the day when given. If the employer chooses to pay the month's salary in four instalments during the month we do not see that you have any remedy or need wish to have.

249/56. *Nicotine*.—If you are, as we suppose, a yearly tenant—that is, not under a lease or agreement for a fixed period—your landlord can only enforce new conditions on you by giving notice to terminate the present tenancy, and he must give you six months' notice, to expire at the quarter when your year begins. But you had better take care to pay up all rent you owe punctually.

254/64. *Dick*.—Your Irish qualification does not entitle you to be regarded as a qualified assistant in England.

254/37. *H. P.*.—There is nothing legally detrimental in a chemist's son being apprenticed to himself.

254/9. *Phenocoll*.—You have a right to a month's notice, no matter how you are paid. But it appears from the report of a case published in this journal of November 9 last that if you accept service with your employer's successor, and therefore suffer no damage, you cannot claim any compensation.

MISCELLANEOUS INQUIRIES.

Back numbers containing formulæ, educational or other specific information can be obtained from the Publisher.

N.B..—All queries should be accompanied by the business card of a subscriber, or the address label from THE CHEMIST AND DRUGGIST wrapper. We destroy anonymous letters. We do not answer queries of the kind here dealt with by post. We ask that separate queries shall be written on separate sheets of paper.

222/48. *Progress*.—(1) *Toilet-cream (not a jelly)*:-

Lanoline ..	..	..	..	..	..	..	5j.
Almond oil ..	..	..	..	..	..	..	5j.
Oleate of zinc (powder) ..	..	..	..	..	..	..	5ij.
Ess. white rose ..	..	..	..	..	..	..	5iss.
Glycerine ..	..	..	..	..	..	..	5j.
Rose-water ..	..	..	..	..	..	..	5j.

Mix.

(2) *Moustache paste*—We presume it is pomade hongroise you mean. See last volume, page 124.

189/6. *Grey Hair*.—See reply page 95. You ask us to suggest something to stop a Patch of White Hair on a woman's head resulting, apparently, from an attack of psoriasis on that spot. This is doubtless due to atrophy of the pigment cells. The best thing for that is liberal doses of tincture of perchloride of iron, beginning with 30 drops thrice daily and gradually increasing to a teaspoonful, the dose to be taken with half a tumblerful of water.

240/42. *A. M.*.—*Liquor Euonymin. et Pepsin*.—See *C. & D.*, July 22, 1893, page 129.

238/54. *H. D. K.*.—We should think the white precipitate in the solution of iron and magnesium sulphate is a little lime. You cannot expect to get these salts chemically pure at the price they are sold at, and a mere trace of impurity often manifests itself after a solution has stood for a day or two. That is the advantage of using dispensing solutions.

238/23. *Rheum c. Soda*.—*Electric v. Gas Light*.—In our experience there is no question that the electric light is far superior to gas light as an illuminant, while the hygienic benefits are incalculable. We have also had the opinions of retailers on the matter, and they are unanimous in saying that they would not go back to gas light, although it is cheaper. This is the opinion of provincial as well as London chemists. We have also spoken about the matter to American chemists, who are even more enthusiastic about the electric light, while several of them do their heating also by electricity. Spiers & Pond have adopted electric heating in their drug-stores at Blackfriars.

237/18. *Hector*.—See reply to "T. P. W.", January 4, page 32. Warington's "Chemistry of the Farm" (Bradbury, 2s. 6d.) is the best book for farmers.

245/43. *Implicatus*.—You will find all about dental qualifications in our last Educational number, September 7, 1895.

243/22. *A Three Years' Subscriber*.—*Paste-blacking*:-

Ivory-black ..	..	..	..	..	..	..	5xvi.
Lamp-black ..	..	..	..	..	..	..	5xvi.
Treacle ..	..	..	..	..	..	..	5xvi.
Sperm oil ..	..	..	..	..	..	..	5iv.
Vinegar ..	..	..	..	..	..	..	5v.
Mix, and add gradually—							
Sulphuric acid ..	..	..	..	..	..	..	5iv.
When action ceases add—							
Sulphate of iron ..	..	..	..	..	..	..	5ss.
Gum arabic ..	..	..	..	..	..	..	5vj.
Hot water ..	..	..	..	..	..	..	5v.

Previously mixed to form a solution. Work well until the paste is brought to a proper consistency.

246/55. *Strad* wants a formula for a good "Lotion for Removing Wrinkles and improving the complexion." There ought to be a fortune in such a preparation. We know nothing better than lanoline for the wrinkles, and if used daily it unquestionably keeps the skin soft. Faith combined with personal hygiene is best for the complexion. "Strad" may find the following suit his purpose:-

Pulv. sapon. castil. alb.	..	..	..	..	..	..	5ij.
Pnlv. boracis ..	..	..	..	..	..	..	5j.
Lanolin ..	..	..	..	..	..	..	5vj.
Ol. cocos ..	..	..	..	..	..	..	5ij.
Aq. ..	..	..	..	..	..	..	5vj.

Rub together for a quarter of an hour, then add gradually and with constant stirring—

Aq. rosa (at 40° C.) 5x.

Shake well and perfume.

This makes a nice milky lotion.

101/96. *Argon*.—The paroeline to be used for spraying feathers should be dissolved in petroleum ether.

244/46. *W. H. P.*.—There is no ordinary red colour which will stand the action of free nitrous acid, as in the decomposition of nitrous ether in horse-drinks; but you can easily avoid the decolorisation with any of the colours you have used by adding excess of bicarbonate of potash to the draught—say, 10 gr. for each ounce of spt. æther, nit. used.

245/29. *Slow*.—*Cheap Lime-cream*.—Try this:-

Potassæ carb.	..	..	..	..	..	..	5ss.
Aq. tepid.	..	..	..	..	..	..	5viiss.
Ol. olive ..	..	..	..	..	..	..	5xxviiss.
Liq. ammon. fort.	..	..	..	..	..	..	5ij.
Ol. limonis ..	..	..	..	..	..	..	5ij.

Dissolve the carbonate in the water and add the oil gradually, shaking after each addition. Lastly add the ammonia and the perfume, and set aside for a few days before bottling.

235/14. *Ajax* sends a few drops of what turns out to be ol. eucalypt. glob., which is sold, under a fancy name, as a Remedy for Colds, Asthma, and Wheezing in Canaries. The directions are "From 2 to 5 drops in the drinking-water night and morning."

237/7. *Syrupus Viole*.—*Beverage Preservative*.—Your sample comes out something like this:-

Acid. salicylic.	..	..	..	..	..	..	5j.
Potass. carb.	..	..	..	..	..	..	5ii.
Aq. bullien.	..	..	..	..	..	..	5xxv.
Glycerin.	..	..	..	..	..	..	5x.

Dissolve the acid and potass. carb. in the water, and add the glycerine.

247/48. *Ormolu*.—The liquid which you send for mixing with gold bronze for gold paint is acetate of amy1.

237/56. *Album*.—*Polishing cloth*.—We cannot find that this is impregnated with any chemical as you surmise. We suspect it is the "elbow-grease" that does the polishing, in combination with what is doubtless a very suitable material.

232/48. *Aloes.—Gold Paint:*—

Gold bronze (good quality)	5ij.
Resin	gr. xx.
Benzine	5j.
Misce.	

242/8. *Crinis.—One-solution Hair dye (Black):*—

Argent. nitr.	3ij.
Aq. destill.	3iv.
Dissolve, and add—	
Liq. ammon.	q.s.

till the precipitate at first formed is re-dissolved.

This gives a preparation like your sample.

247/49. *Oils.—Your sample of Oils for Sprained or Swollen Joints and Bunions consists, approximately, of:*—

Ol. linii	5j.
Chloroform.	5ss.
Spt. vini rect.	5ij.

Well shake before use.

238/55. *Salopian.—In regard to removing the yellow stains which your customer notices on photographic prints made on albuminised paper, and which show just after the final washing, we can hardly advise without seeing them. Try peroxide of hydrogen or eau de Javelle, applied by means of cotton-wool, and follow by well washing.*

239/22. *Okie.—Your Paste Liniment is very far from being a paste as it reaches us. It can be imitated thus:—*

Ol. terebinth.	5viii.
Sapo mollis	5ij.
Liq. ammon.	5j.
Aq. destill.	5ij.

Rub the soap and water together till smooth, then gradually add the turpentine, and lastly the ammonia.

251/26. *Nomen.—It is generally a wise proceeding when selling a business to employ a valuer, even if you do not employ such a person as agent. You may by advertising catch your purchaser promptly. If you do you save the agent's commission, but unless you are pretty well experienced in the art of selling businesses it is quite possible that the agent would more than earn his fee for you by the better terms he would get for you. If you go to more than one agent take care to have a very clear understanding as to the conditions under which you are to be liable to pay commission, or you may find yourself subject to legal claims from more than one. When it comes to valuation we strongly advise you to employ a professional valuer for yourself.*

252/29. *Cherry asks about "Sannato," a remedy for spermatorrhea. We think Sanmetto is meant. Messrs. Burgoyne, Burbidges & Co. are the agents for it.*

236/49. *Apprentice.—You will find a formula for Liquid Dentifrice on page 808, November 30, 1895. If you want it to froth add pulv. sapon. 5ss.*

243/58. *F. W. Ford.—Thanks for your note. You will observe that the DIARY list of general, &c., societies includes "the principal societies in London," and the British Phrenological Association does not appear in the London Directory.*

243/65. *Lymph.—Dentists' Impression-wax.—See C. & D. DIARY, 1894, page 361.*

236/61. *A. B.—Erasmus Wilson's Hair-lotion.—See C. & D., May 26, 1894, page 752.*

241/73. *Carving.—Try the matt-varnish given on page 392 of the DIARY.*

INFORMATION SUPPLIED.

For this section we are always glad to receive from subscribers brief notes on practical subjects, recipes which have been found good in practice or which have required modification, and hints or fresh ideas on any pharmaceutical or trade matter.

229/59. *Iodine Paint.—In the South of Ireland we always dispense equal parts tinct. and lin. iodi for the above. Our authority was Dr. McNaughton Jones.*

J. B. & Son.

Benzoinol.—In your issue of December 21 you have an inquiry for "benzoinol," and I am pleased to give you some information. Benzoinol is the trade-marked name for ol. petrodatum benzoinatum, manufactured in New York and distributed by W. H. Schieffelin & Co. of that city. It is a colourless oily liquid with the odour of benzoin, used as a vehicle in inhalations for such ingredients as carbolic acid, oil of pine, thymol, iodine, &c. Sincerely,

Montreal, January 8. ALEX. M. MACMILLAN.

228/68. *Syrupus Cujuav.—Possibly what is meant is syrupus crescentiae. Fresh juice of the pulp of calabash (*Crescentia cujete*) boiled with sugar q.s. Prepared in the West Indies. Pectoral, against inward bruises, and in large doses purgative. (Beasley's "Pocket Formulary.")*

J. F. B.

I think Syrupus Cujuav is intended for syrupus cujusvis. H. H.

INFORMATION WANTED.

The Editor invites, on behalf of inquiring subscribers, postcard replies to the following:—

253/6. *Makers of glycerine, eucalyptus, terebene, and cocaine lozenges.*

252/28. *Gold powder for making gold paint: who supplies?*

Next Week.

Tuesday, January 28.

Royal Institution of Great Britain, at 3 P.M. Professor Charles Stewart on "The External Covering of Plants and Animals: Its Structure and Functions."

Edinburgh District Chemists' Trade Association. Continuation of discussion on "Some Relations between Prescriber and Dispenser." Consideration of communication from the Edinburgh Decimal Association, &c.

Royal Photographic Society, 12 Hanover Square, W., at 8 P.M. "Dr. Rudolph's Method of Lens-testing and Some of His Results," by Mr. J. H. Agar Baugh; "Stereomicrograph with New Colour-tone Effects," by Mr. Fred Isles.

Chemists' Assistants' Association. Cinderella Dance, Portman Rooms. Tickets from Mr. H. H. Robins, 59 Capel Road, Forest Gate.

Wednesday, January 29.

Midland Chemists' Assistants' Association, Exchange Rooms, Birmingham, at 9 P.M. Paper: "Chemistry: Past and Present," by Mr. A. L. Taylor.

Sheffield Pharmaceutical and Chemical Society, Montgomery Hall, at 8.30 P.M., Sir Henry Stephenson presiding. Lantern lecture by Mr. W. L. Howie on "The Swiss Alps."

Brighton Junior Association of Pharmacy, Newburg Hall, at 9 P.M. Debate on "The Pharmaceutical Society."

Thursday, January 30.

Plymouth and District Junior Chemists' Association, at the Foresters' Hall, at 8.30 P.M. Mr. James Cocks on "Dispensing Notes."

Friday, January 31.

Royal Institution of Great Britain, at 9 P.M. Mr. Sidney Lee, on "National Biography."